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ABSTRACT

This monograph reports on an intervention that attempted to improve the flexible organizational problem solving of a junior high school faculty. Organizational development, not personal change, was the study's goal. Although the emotional reactions of faculty members were considered in the design, the intervention concentrated on organizational roles and norms and their interrelationships. The researchers questioned whether a faculty could improve its organizational functioning--using group training in communication and problem solving--while conducting the normal business of the school. Data from the study indicate that organizational changes occurred in verbally expressed attitudes about the principal and staff meetings, in the kinds of innovations reported, and in the changing norms of the faculty. (Author/MF)

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Organizational Training for a School Faculty

Richard A. Schmuck Philip J. Runkel

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There is no real trick to establishing an organization without problems. One needs only to let it be known that no problems will be tolerated, and none will occur—at least none that become evident. With the slightest encouragement, subordinate levels of supervision can act as effective insulators between the manager and the problems.

ROBERT E. THOMPSON
Business Horizons

Contents

FOREWORD ix

ACKNOWLEDGMENTS xi

I. SUMMARY 1
- Training Goals 3
- Intervention 4
- Organizational Changes 7
- Comparison with Other Schools 9
- Lessons for Consultants 17

II. THEORY AND DESIGN 24
- Using Resources and Making Decisions in Organizations 25
- Decision-Making Styles 26
- General Design 32

III. TRAINING IN THE SUMMER WORKSHOP 38
- Activities and Goals 39
- Narrative 40

IV. TRAINING DURING THE SCHOOL YEAR 60
- Diagnostic Interviews in November 60
- December Session with Entire Staff 63
- January Session with Advisory Committee 69
- February Session with Entire Staff 70
- February Session with Advisory Committee 77

V. OUTCOMES: ORGANIZATIONAL CHANGES 79
- Hypotheses 79
- Concrete Instances of Organizational Change 80
- Later Reports 98
- Summary 101

VI. COMPARISONS WITH OTHER SCHOOLS 102
- Comparisons with New York City Area Schools 102
- Comparisons with Junior High Schools Near Seattle 112
- Summary 134

VII. FUTURE WORK 137
The Nature of the Training Activities 137
Strengths of the Summer Workshop 138
Weaknesses of the Summer Workshop 143
Strengths of the Training During the School Year 145
Weaknesses of the Training During the School Year 147

APPENDIX A 150
The School District and the Historical Events Leading to the Project

APPENDIX B 154
Materials Used with the Exercise "The Trip Across the Moon"

APPENDIX C 157
The Five-Square Puzzle

APPENDIX D 159
The Hollow-Square Problem

APPENDIX E 162
Memo on Report to the Oregon Education Association

APPENDIX F 165
Questionnaire on Communication

APPENDIX G 167
Questionnaire Administered at Highland Park in May, 1968

APPENDIX H 176
The Principal of This School

APPENDIX I 178
Highland Park Versus Schools Near New York: Pretest Means for the Questionnaire on Principal

APPENDIX J 179
Staff Meetings

APPENDIX K 182
Highland Park Versus Schools Near New York: Pretest Means for the Questionnaire on Staff Meetings

APPENDIX L 183
Technical Information About the Data on Innovations

APPENDIX M 185
Some Considerations of Validity

BIBLIOGRAPHY 190

Foreword

AMERICA'S schools, besieged with social and financial maladies, are simultaneously being badgered to adopt emerging educational innovations that will make them "relevant." This combination of forces is often more than the system can tolerate.

The Center for the Advanced Study of Educational Administration at the University of Oregon has organized five programs based on the premise that the nation's schools are not likely to solve these critical problems without first receiving help in changing their internal organizational and administrative arrangements.

For example, any major innovation in curriculum or instruction implies a change in the normal flow of activities within the school. The relationship between teachers and administrators is apt to change. Often the change not only affects the principal and his faculty, but it negates the normal relationships among them and the nonprofessional staff and students. Consequently, authority relations, communication networks, status groupings, and even friendship cliques change. In the process, the innovation often fails; or it is restructured to conform to the "old way" of doing things.

Knowing this, CASEA directed one of its programs to develop strategies of organizational change (Program 30). This monograph results from the work done in the program at Highland Park Junior High School in Beaverton, Oregon. The intervention at the school was the first within the program and thus it has done much to formulate later work of the researchers.

The authors undertook the Highland Park project with the assumption that future decision-making in school districts will make fuller use of teachers' resources instead of relying on hierarchical directives. Such a change in policy, they realized, necessitates a greater distribution of autonomy and power. In turn, schoolmen will need more skills in utilizing interpersonal communications. Thus the primary purpose of the Highland Park project was to increase the organizational problem-solving ability of a school faculty by improving communication skills.

As a key part of their design, the researchers used a technique of improving communication in small groups that has a twenty-year history of trial and application in many types of organizations. This technique, generally known as the "laboratory method," has the communicating group use its own habits and norms as materials with which to experiment. At Highland Park, however, the laboratory method was modified. Instead of working to improve an organization by sharpening the skills of its individual members, the CASEA team worked to improve Highland Park by increasing the communicative abilities of its groups. To accomplish this, the researchers had the staff use actual school problems as the basis for their group training.

Readers with doubts about the effectiveness of such organizational training will discover that the authors wrote with them in mind; every detail of the intervention is described. In many respects the monograph is a technical report. Its pages bulge with data, and its ample appendixes include samples of the questionnaires and descriptions of the products utilized by the researchers. Every aspect of the intervention is explained. And the authors scrutinize the failures in their project with the same exactness they use in explaining its achievements.

The authors also realize that many readers desire only an overview of the project. For them the first chapter will suffice. It is a capsule presentation of the total intervention and its outcomes.

This chapter, incidentally, was the basis for the paper that was honored in 1969 as the outstanding work of that year delineating a connection between organizational theory and practical work. As such, it won for its authors the Douglas McGregor Memorial Award.

Both authors are research associates with the Center for the Advanced Study of Educational Administration. Richard A. Schmuck is professor of educational psychology and Philip J. Runkel is professor of psychology.

E. JOSEPH SCHNEIDER
CASEA Editor

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We are especially grateful to the members of the Highland Park staff for reviewing this manuscript and giving us many helpful suggestions. In particular, we could not have told the story clearly if all staff members had insisted on complete anonymity. Consequently, we are deeply grateful to the Highland Park people for allowing us to report their struggles and setbacks as well as their successes.

We also wish to give special acknowledgment to Ray Talbert, director of the Oregon Compact, and to the numerous colleagues who helped in different phases of the project: Robert Daw, Rene Pino, and Mary Jo Woodfin for their services during the summer workshop; and Fred Fosmire, Rosalie Howard, Daniel Langmeyer, Ron Martell, Margaret Runkel, Steve Saturen, Robert Talbott, and Neil White for serving as consultants to Highland Park at either the December or February workshops or both.

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RICHARD A. SCHMUCK
PHILIP J. RUNKEL

1

Summary

LIKE many organizations with traditional modes of operation, schools are suffering stresses to which their customary practices seem ill-adapted. When faced with massive changes in the community, a school can adopt at least two strategies. One is for the school to remodel itself into a form maximally adapted to the new demands of the community, e.g., the middle school, the campus school, the unitized school, and the community school. The other strategy is to build new norms and procedures that enable the school constantly to monitor the changing community, to compare the results of its own reactions with what it would accept as movement toward its goals, and to establish new forms whenever the movement toward the goals falls below a criterion. This latter

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This chapter appeared in the *Journal of Applied Behavioral Science*, 1969, Vol. 5, No. 4 under the title, "Improving Organizational Problem-Solving in a School Faculty," as the winner of the Douglas McGregor Memorial Award for that year and is reprinted here, with slight editorial changes, with the permission of that journal. Daniel Langmeyer is a coauthor of this chapter.

strategy we call *flexible organizational problem-solving*. John Gardner (1963) has called it *self-renewal*, and Walter Buckley (1967) has referred to it as *morphogenesis*. The purpose of this project was to improve the capability of a school for organizational problem-solving.

From the point of view of research, our purpose was to test whether improved organizational problem-solving could be produced in a school faculty by training in interpersonal communication skills, where the group processes to be altered and the methods of doing so were consistent with McGregor's thinking (1967). We assumed, along with McGregor, that functions within organizations are "carried" through interpersonal interactions and that heightening abilities for organizational problem-solving must commence with new norms for interpersonal openness and helpfulness. In seeking a lever with which to change group norms, we adopted McGregor's strategy:

> . . . to provide opportunities for members of the organization to obtain intrinsic rewards from contributions to the success of the enterprise. . . . The task is to provide an appropriate environment—one that will permit and encourage employees to seek intrinsic rewards *at work* (pp. 13-14).

We did this by inviting the faculty to list the frustrations they encountered in the school and to practice a sequence of problem-solving steps to reduce these frustrations. This activity led to reduced frustrations and to the satisfaction of knowing that others valued the contribution one made to outcomes desired by the faculty. It also facilitated changes in organizational norms by requiring staff members to behave in new ways in the actual work-group. Others, meanwhile, could observe this new behavior, thus allowing staff members to see that their colleagues actually accepted the new patterns of behavior in the school setting.

In designing this intervention, we relied on the laboratory method (Bradford, Gibb, and Benne 1964). The training often called for conscious observations of the group processes of the faculty; the design required actually practicing new behaviors before using them in daily work. Although the design made use of the school as its own laboratory, we used the laboratory groups in ways very different from sensitivity training or the T-group. Personal development was not our target. We did not attempt to improve the interpersonal functioning of individuals directly; when this occured, it was incidental. Our targets were the faculty as a whole and several subgroups within it. We sought to increase the effectiveness of groups as task-oriented entities. We tried to teach subgroups within the school, and the faculty as a whole, to function more effectively as working bodies carrying out specific tasks in that particular

job setting. This training strategy was supported by a recent review of research by Campbell and Dunnette (1968) on the transfer of skills from T-groups to organizations. They found that a T-group, as ordinarily conducted with focus on individual growth in a setting away from the job and without guided application to work-a-day tasks, has had little effect on organizational development.

In comparison to other efforts at bringing about more effective organizational functioning in schools, our intervention contained a unique combination of three features. First, our training involved actual groups from the school we sought to affect. Next, we carried on training with the entire school staff, including secretaries, the head cook, and head custodian. Finally, during the training and especially in its early parts, we rotated sizes and memberships of subgroups so that every pair of staff members interacted with each other in more than one kind of group.

Training Goals

The major training goals were developed out of a conception of flexible organizational problem-solving. We hoped that the faculty of our experimental school would establish a continuing series of activities for improving its own communication; we held this to be a minimum necessity. Further, we hoped that participation at faculty meetings and the initiation of attempts at influence would spread to more and more members of the faculty. We tried to help the faculty increase its discussions about interpersonal or interrole problems and continue to make conscious use of a sequential problem-solving technique. We hoped that the teachers would increase their initiative in solving problems encountered with those in higher echelons and that the initiator of an idea would test it more frequently than previously with a lower-echelon subgroup before carrying it to the administration.

For us, the most significant goals involved structural and instructional changes in the school. We hoped that the staff would invent new organizational forms within their school or at least borrow some from our training that would help them to confront problems continuously. Finally, we wanted the teachers to find uses for the new forms and methods from the training that would affect their classroom instruction.

We supplemented these broad goals with more specific ones in designing the initial training events that centered on interpersonal skills and systematic problem-solving. We first aspired to build increased openness and ease of interpersonal communication among the faculty by training them in skills of paraphrasing, describing behavior, describing

own feelings, and perception checking. We hoped that through skillful, constructive frankness with one another the staff would develop an increased confidence that communication could be worthwhile. We strove to increase skills of informing others about their behavior and of receiving information about one's own behavior. After increasing communication skills, we hoped to stimulate skill development in using a systematic problem-solving procedure and in helping colleagues to enunciate ideas clearly that might develop into practical plans for solving organizational problems.

Intervention

We assumed that the faculty of our experimental school would attempt new interpersonal procedures if they could first practice them away from the immediate demands of the school day. We also assumed that transfer to everyday work of the building would be maximized if the faculty expected to continue problem-solving activities on their own after each training event and if the training design called for additional training some weeks and months following the first event. Within this framework for transfer of organizational training, we made several other assumptions.

We believed that communication could be improved, that feelings of solidarity could be increased, and that power differences could be clarified if virtually every pair of persons on the faculty was brought into face-to-face interaction during the initial training period. Next, we thought that the initial input during training should pose a discrepancy between the ideal and the actual performances of the faculty. From confrontations with discrepancies would come problem solving. We expected that applications to the work of the school building would be maximized if the faculty dealt with real organizational problems even during the first week of training. Furthermore, we thought that training in a series of overlapping small groups would help individuals to use the skills learned in one group in each of the next training groups; and, subsequently, they would transfer the accumulated skills to groups in which they work ordinarily. Finally, we assumed that the transfer of the communication and problem-solving skills to the school would be facilitated if faculty members conceptualized the possible applications of the skills and made plans to try them out in the real school setting.

Training commenced with a six-day laboratory in late August of 1967. Almost the entire building staff was present. The fifty-four trainees included all the administrators, all but two of the faculty, the head cook, head custodian, and head secretary. The first two days were spent in group exercises designed to increase awareness of interpersonal and or-

ganizational processes; e.g., the NASA Trip-to-the-Moon exercise, the five-square puzzle, and the hollow-square puzzle. Although these exercises were like games, they demonstrated the importance of effective communication for accomplishing a task collaboratively. After each exercise small groups discussed ways in which the experience was similar or different from what usually happened in their relations with one another in the school. All staff members then pooled their experiences and analyzed their relationships as a faculty. Each small group chose its own way to report what it had experienced. Trainers supported openness in giving and receiving feedback about perceptions of real organizational processes in the school. Brief but specific training was given in clear communication, overcoming difficulties in listening, and skills in describing another's behaviors. A couple of nonverbal exercises augmented this.

The faculty devoted the last four days to a problem-solving sequence, working on real issues that were thwarting the school's organizational functioning. After a morning of discussion and decisions, which also served as practice in decision-making skills, three significant problems emerged:

1. Insufficient role clarity, especially in the roles of principal, vice-principal, counselors, and area (departmental) coordinators
2. Failure to draw upon staff resources, especially between academic areas but also within subject-matter specialties
3. Low staff involvement and participation at meetings of committees, areas, and the full faculty

Three groups formed, each to work through a problem-solving sequence directed toward one of these problems. Each group followed a five-step procedure: (1) identifying the problem through behavioral description, (2) diagnostic force-field analysis, (3) brainstorming to find actions likely to reduce restraining forces, (4) designing a concrete plan of action, and (5) trying out the plan behaviorally through a simulated activity involving the entire staff.

Each group worked substantially on its own; the trainers served as facilitators, rarely provided substantive suggestions, and never pressed for results.

The group concerned with clarifying roles reasoned that an ambiguous role often served as a defense. Thus as a first step they carried out four nonverbal exercises to increase trust among the faculty.

The group on using staff resources set up eight subgroups, each of which was to pretend to be a junior high faculty facing a crisis due to

lack of texts. Each subgroup then developed curricula drawing upon one another's resources.

The group on low staff involvement arranged for three groups to discuss role clarification, staff resources, and staff involvement. During the discussions, the more loquacious members were asked one after another to stop participating until only two members remained. Discussions were then held in each group about feelings toward staff involvement.

The first week of training culminated with a discussion to highlight the resources on the staff. Members described their own strengths and those of their colleagues. Finally, they discussed what their school could be like if all faculty strengths were used.

During the early fall we interviewed all faculty members and observed several committees and subject-area groups to determine what uses they were making of the first week's training. The data indicated that unresolved problems were communicative misunderstandings, role overload, and capabilities for group problem-solving.

The second intervention with the entire staff was held for one-and-one-half days in December. In this session we attempted to increase the effectiveness of the area coordinators as communication links between teachers and administrators, to increase problem-solving skills of the area groups and the Principal's Advisory Committee, to help the faculty explore ways of reducing role overload, and to increase effective communication between service personnel and the rest of the staff. Training activities included communication exercises, problem-solving techniques, decision-making procedures, and skill development in group observations and feedback. On the first day, area (departmental) groups applied problem-solving techniques to their own communication difficulties and received feedback by observing other groups. Problems raised were brought the next day to a meeting of the Principal's Advisory Committee held in front of the staff. The latter observed the committee in a fishbowl arrangement, participated in specially designed ways, and later reflected on how effectively the committee had worked and how accurately members had represented them.

The third training intervention also lasted one-and-one-half days and took place in February. The main objective was to evaluate staff progress in solving the problems of resource utilization, of role clarity, and of staff participation and to revivify any lagging skills. A group discussion of each problem area was held. Every teacher was allowed to work in the group considering the problem that most interested him. Each group discussed the positive and negative outcomes associated with its problem.

For example, in the group discussing staff participation, the question was: "In what ways has staff participation improved and where has it failed to improve?" The group wrote out examples of improvements, no changes, and regression in staff participation. The groups tried to devise ways to eliminate the negative instances by modifying the school's organizational processes.

Faculty members continued with this activity in small groups during the spring without our presence.

Organizational Changes

Evidence of the effects of the training came in the form of concrete, observable changes in the behavior of faculty members and administrators in our experimental school. These data were taken primarily from spontaneous events that were later reported to us and corroborated by the parties involved or by disinterested observers. Because these actions were not directly a part of our planned training events, they constituted movements in the direction of increased flexible organizational problem-solving.

About three months after the first week's training, a sample of the faculty was interviewed and asked to write essays on the effects of the training. From these data we discovered that at least nineteen teachers were applying techniques learned in the organizational training to improve the group processes in their classrooms. Application typically involved such procedures as "using small groups for projects," "using nonverbal exercises to depict feelings about the subject matter being studied," "using theater-in-the-round or fishbowl formations for having students observe one another," "using a paraphrasing exercise to point out how poor classroom communications are," "using the problem-solving sequence and techniques in social-studies classes to learn more about social problems," and "using small groups for giving and receiving feedback about how the class is going." As far as we know, the teachers used none of these practices before the organizational development laboratory.

Prior to our intervention a group of eight teachers called the "Teach Group" was granted freedom to alter schedules, classroom groupings, assignment of teachers to classes, and other logistics in attempts to maximize their educational impact on a selected group of students. The teachers, made up mostly of area coordinators, received many negative reactions from other staff members. They were envied, misunderstood, and often in conflict with others. Their innovative ideas were more often resisted than emulated. However, the organizational training seemed to

ameliorate the distrust, and by the end of the year the "Teach Group's" type of collaboration extended to twice as many teachers. At the same time, two other teachers decided to form a team to gain some of the advantages of mutual stimulation and resource sharing.

The Principal's Advisory Committee, composed of administrators and area coordinators, increased its power. It became a representative senate with decision-making prerogatives. During the December training event the group members delineated and accepted their roles as representatives of their areas and as gatherers of information for the upper-echelon administrators. Later, an actual occurrence lent credence to the committee's power. Members of the mathematics area decided that they were underrepresented on the committee because their area coordinator also held responsibilities as a district curriculum consultant. They petitioned the principal through the advisory committee for a new area coordinator, and one was chosen. The primary criterion for selecting the person seemed to be his recent improvements in interpersonal and group skills.

Later in the school year the advisory committee requested two other training events to help it clarify its role in the decision-making structure of the school.

Other events indicated that the quality of staff relationships improved because of the intervention. For instance, only two teachers resigned at the end of the year, giving the school a turnover rate of only 3 per cent. Comparative rates in other junior high schools in the same district ranged from 10 to 16 per cent. Several times during the year faculty meetings were initiated by members other than the principal. Such initiations broke tradition, but nevertheless those meetings went smoothly with strong staff participation.

During the spring of 1968 faculty members organized a meeting to discuss the possibility of having another group-process laboratory before the next school year. The faculty members first discussed the idea in area groups and later asked to meet as a total staff to present recommendations to the advisory committee. The laboratory or workshop was to have two goals: (1) to socialize new faculty members into this "group-oriented" staff, and (2) to give teachers new skills to use with their classes. The workshop took place, without our active participation, in August, 1968.

The principal's interpersonal relationship with staff members was noticeably improved, and he became excited about further enhancing his leadership skills. He requested, and received, funds to attend an NTL Educators' Laboratory. Later he served as an assistant trainer in a laboratory and performed with great effectiveness. That same summer six faculty

members paid their own way to a group-processes laboratory.

Perhaps the most dramatic changes after the intervention occurred in the school district. First, a new job, vice-principal for curriculum, was created at our experimental school. He was to act as consultant on interpersonal relationships to task groups within the staff. The position also called for providing liaison between groups, providing logistical support for curricular efforts, transmitting to upper echelons in the district the proposals for curricular development originating at the school, and serving as liaison with other junior high schools in the district concerning innovations in curriculum. This new vice-principal was asked by the superintendent to maintain a log of his activities and to develop a job description for possible use in other schools. With this accomplished, the school board granted funds for the position in several other junior highs. The first curricular vice-principal has been asked to aid the other new vice-principals in learning the role. Other district schools have requested funds for organizational development training in their schools and for the introduction of the facilitator as a vice-principalship.

Comparisons with Other Schools

The previous section contained descriptions of directly observable outcomes reflecting commitments to action within the school. This section reports comparisons of data taken from questionnaires administered early and late during the 1967-68 school year at the experimental school with data from six junior high schools in the New York City area and four junior high schools near Seattle. None of the New York or Seattle schools was engaged in our kind of organizational training; in their demographic characteristics, too, they met some of the requirements for a control group.

The data for comparing our school with the New York schools came from two questionnaires dealing with the faculty's opinions about the principal's behavior and about staff meetings. The data for comparing the experimental school with the Seattle schools came from questions concerning innovations adopted, readiness to communicate about interpersonal relations, and readiness to use and share the resources of other staff members.*

* The data from the junior high schools near New York were kindly provided by the Cooperative Project on Educational Development (COPED). Some of the questionnaire items used with the schools near Seattle were adopted from items used by COPED; some others were adapted from items kindly suggested by Ray Jongeward and Michael Giammetteo of the Northwest Regional Educational Laboratory. For a description of COPED, see Watson (1967).

THE PRINCIPAL

The questionnaire used to measure the faculty's feelings about the principal contained twenty-four items. Half of them were used by Gross and Herriott (1965) to measure the Executive Professional Leadership (EPL) of elementary school principals; the remaining twelve items were developed by the Instrumentation Committee of the Cooperative Project on Educational Development (COPED) to measure the managerial and social support the principal gives his staff.

The facet of educational leadership studied by EPL is concerned with the principal's efforts to improve his staff's performance. Gross and Herriott (1965) found EPL to be related to staff morale, the professional performance of teachers, and learning by students. Hilfiker (1969) used the same instrument and found that both EPL scores and social-support scores were related to school systems' innovativeness. Because of these findings we thought that the items in this questionnaire were reasonable indicators of the direction the interaction of faculty and principal would take if our faculty training approached its goals.

EPL was measured by asking teachers to what extent their principal engaged in activities such as:

Makes teachers' meetings a valuable educational activity
Treats teachers as professional workers
Has constructive suggestions to offer teachers in dealing with their problems

A principal's managerial support was measured by items such as:

Makes a teacher's life difficult because of his administrative ineptitude
Runs conferences and meetings in a disorganized fashion
Has the relevant facts before making important decisions

A principal's social support was measured by items such as:

Rubs people the wrong way
Makes those who work with him feel inferior to him
Displays integrity in his behavior

To compare the teachers' responses to this questionnaire at the experimental school with the responses at the six junior high schools near New York City, we performed a series of chi-square analyses. For every item and every school, we let the pretest results be the estimate of expected proportions against which to test the proportions obtained at the posttest —the proportions, that is, of teachers responding in one of six preferred categories. A summary of the analyses appears in table 1-1, where the schools near New York are labeled A through F.

TABLE 1-1
Numbers of items showing significant changes ($p < .10$) among those in the questionnaire on the principal.

	School						
	Exp'l	A	B	C	D	E	F
Positive change	18	1	2	0	0	5	9
No significant change	6	19	17	12	13	19	11
Negative change	0	4	5	12	11	0	4

The results leave little doubt that the experimental-school faculty changed their perceptions of the principal much more than did any of the other school staffs. At the experimental school the teachers changed significantly ($p<.10$) on eighteen of the twenty-four items; more importantly, every change was in the positive direction. In contrast, in no other school except School F did the teachers change on more than half of the items. Furthermore, in schools A, B, C, and D, more of the changes were in a negative direction, indicating that the principal was being viewed less in accord with the EPL ideal at the end of the school year than at the beginning. The staffs of schools E and F changed more positively than negatively, but on far fewer items than at the experimental school.

Specifically, the teachers at our school were reporting that their principal was easier to get along with, made better decisions, helped them more in their own problem-solving, improved faculty meetings and conferences, and treated them more as professionals after our training had been completed than before. Staffs at junior high schools in the New York City area not undergoing organizational training did not report similar changes.

STAFF MEETINGS

We were concerned about staff and committee meetings because they are important formal arenas in which communication and group problem-solving can occur. Our early conversations with the experimental-school staff revealed that low participaton at staff meetings was viewed as an acute problem. We hoped that improvements in the conduct of meetings would occur as a result of the organizational training. To gauge such change, we used a questionnaire developed by the COPED instrument committee and reworded in minor ways by us to measure educators' responses to their school's meetings. The questionnaire contains thirty-

seven items and has yielded excellent reliability.* The total score and subscale scores from this instrument have been found to be related to a school system's innovativeness (Hilfiker 1969).

The thirty-seven items describe specific behaviors; teachers are asked to rate each in one of six categories of frequency of its occurrence at staff meetings. The following are sample items from the instrument:

> When problems come up in the meetings, they are thoroughly explored until everyone understands what the problem is.
>
> People come to the meeting not knowing what is to be presented or discussed.
>
> People bring up extraneous or irrelevant matters.
>
> Either before the meeting or at its beginning any group members can easily get items on to the agenda.
>
> People don't seem to care about the meeting or want to get involved in it.
>
> People give their real feelings about what is happening during the meeting itself.
>
> When a decision is made it is clear who should carry it out and when.

In a manner identical to the questionnaire dealing with the principal, pretest responses for each item and from each school were used as expected frequencies for evaluating shifts in posttest data. Data about staff meetings were available only from three of the six comparison schools: A, C, and D. Table 1-2 summarizes the chi-square analyses applied to these

TABLE 1-2
Numbers of items showing significant changes ($p < .10$) among those in the questionnaire on staff meetings.

	Schools			
	Exp'l	A	C	D
Positive change	21	3	2	6
No significant change	14	30	32	23
Negative change	2	4	3	8

data. Like the results on the changed perceptions of the principal, the results on staff meetings also show major differences between the changes

* The total test was analyzed by Warren Hagstrom using Frank Baker's test-analysis package at the University of Wisconsin. Using a sample of 625 school professionals, including both teachers and administrators who described a wide variety of meetings and types of meetings, a reliability (Hoyt analysis-of-variance method) of .96 was found for the total score.

at the experimental school and the changes at the comparison schools. Among the thirty-seven items, our school showed significant positive change in twenty one, School A in three, School C in two, and School D in six. Changes at our school were almost entirely in the positive direction; among twenty-three significant changes ($p<.10$) only two were negative. In contrast, changes in the comparison schools could hardly have been more evenly balanced between positive and negative. The nature of the items on the questionnaire permits us to conclude that members of the experimental school reported that they could be more open, had improved the conduct of their meetings, dealt with problems more completely, had more commitment to the meetings and solutions emerging from meetings, and thought that meetings were more worthwhile after completing our organizational training.

INNOVATIONS

The experimental school and four junior high schools from two cities near Seattle were administered an instrument as part of a larger project. One of the questions in the instrument was:

> How about recent changes that could have useful effects on your school? Have there been any innovations, any new ways of doing things, that began during the last year or two that you think could have helpful effects in the school? If so, please describe each very briefly below. If none, write "none."

Teachers' responses to this item were coded into fourteen categories according to the nature of the innovations they mentioned. For this report we have gathered these categories into the four types shown in table 1-3. "Packaged" innovations include curricular changes, establishing new jobs or duties, acquiring equipment, and adopting methods of evaluating programs. We describe these as "packaged" because accompanying the innovation is some tangible set of materials or instructions like teaching materials, specifications for a new job, TV equipment, or guidelines for a bookkeeping method. Moreover, innovations under this heading can usually be put into effect by training *individuals*; it is seldom necessary to establish delicate new role relations or new modes of group problem-solving. Packaged innovations were mentioned more frequently in three of the schools near Seattle (labeled W through Z in table 1-3) than in the experimental school.

Another cluster of innovations contained those *instrumental* in achieving new forms of organization and new methods of solving organizational problems. Here we included relations between teachers and students,

TABLE 1-3
Numbers of teachers mentioning four types of innovations.

Type of Innovation Mentioned	*Schools*					
	Exp'l Dec. '67 N=46	W N=30	X N=30	Y N=34	Z N=44	Exp'l May '68 N=39
"Packaged": curriculum, new jobs, equipment, program evaluation	18	25	11	36	22	15
Instrumental in achieving new forms of organization	9	0	3	1	1	16
New methods of problem solving or new organizational structure	21	1	1	0	1	17
Nonspecific improvements and vague answers	6	0	0	0	0	6

Note: Schools W, X, Y, and Z answered the questionnaires in January, 1968.

sharing power among the faculty, and changes in frequency or content of communication, as well as new training of any kind and new attitudes without mention of accompanying actions in organizational arrangements. Although the total number of responses in these categories was generally low by comparison with the first set of "packaged" innovations, mentions from the experimental school were more frequent than mentions from any of the other four junior high schools.

Innovations of primary importance to our training goals were new *methods of solving problems* or making decisions and *new organizational structure* such as committees, channels, and conference groups. Table 1-3 shows that the experimental-school teachers reported many more innovations in this area than the other junior high school faculties.

NORMS ABOUT INTERPERSONAL COMMUNICATIONS

We asked the faculties at the experimental school and at the four junior high schools near Seattle to answer seven questions about their readiness to discuss feelings. Three of the questions were:

> Suppose a teacher (let's call him or her Teacher X) disagrees with something B says at a staff meeting. If teachers you know in your school were in Teachers X's place, what would most of them be likely to do? Would most of the teachers you know here seek out B to discuss the disagreement?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not*.
( ) I don't know.

Suppose you are in a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school; Teacher X quickly suggests that the committee get back to the topic and keep the discussion objective and impersonal. How would you feel toward X?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.
( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

Suppose Teacher X feels hurt and "put down" by something another teacher has said to him. In Teacher X's place, would most of the teachers you know in your school be likely to avoid the other teacher?

( ) Yes, I think most would.
( ) Maybe about half would.
( ) No; most would *not*.
( ) I don't know.

Taking those respondents who did not skip the question or answer "I don't know," we analyzed the responses. We found that the experimental-school faculty reported that more teachers would (1) seek out another person with whom they had a disagreement, (2) tell another teacher when they had been hurt by the other teacher, (3) be less approving of a teacher who tried to cut off talking about feelings in a committee meeting, and (4) be more approving of a teacher who shared his own feelings at a faculty meeting than were reported by teachers from the other four schools. There was no significant difference between the experimental-school teachers and others in (5) their estimation of the proportion of teachers who would keep a disagreement to themselves (most in all schools felt most would do so).

On the other hand, many more teachers in the schools near Seattle than in our school claimed that their fellow teachers would (6) *not* avoid another teacher and (7) would *not* tell their friends the other teacher was hard to get along with if the other teacher had hurt them or "put them down."

On balance, we believe these results indicate that after our intervention the experimental-school faculty, to a greater degree than faculties

near Seattle, were more open in their interpersonal communication and were more willing to talk about their feelings.

NORMS ABOUT SHARING IDEAS AND HELPING OTHERS

Along with items reflecting norms about interpersonal communication, twelve items in the questionnaire concerned a faculty's readiness to ask for help from other staff members and to give help to them. Here are three examples:

> Suppose Teacher X develops a particularly useful and effective method for teaching something. In Teacher X's place, would most of the teachers you know in your school describe it briefly at a faculty meeting and offer to meet with others who wanted to hear more about it?
>
> ( ) Yes, I think most would do this.
> ( ) Maybe about half would do this.
> ( ) No; most would *not*.
> ( ) I don't know.
>
> Suppose Teacher X develops a particularly useful and effective method for teaching something. If X were to describe the method briefly at a faculty meeting and offer to meet further with any who wanted to know more, how would you feel about it?
>
> ( ) I would approve strongly.
> ( ) I would approve mildly or some.
> ( ) I wouldn't care one way or the other.
> ( ) I would disapprove mildly or some.
> ( ) I would disapprove strongly.
>
> Suppose Teacher X wants to improve his classroom effectiveness. If X asked another teacher to observe his teaching and then have a conference about it afterward, how would you feel toward X?
>
> ( ) I would approve strongly.
> ( ) I would approve mildly or some.
> ( ) I wouldn't care one way or the other.
> ( ) I would disapprove mildly or some.
> ( ) I would disapprove strongly.

The faculty at the experimental school reported that they would (1) expect other teachers to report useful and effective teaching methods at faculty meetings, (2) seek administrative support to disseminate these methods, and (3) approve to a significantly greater degree teachers who engaged in such activities than would faculties of the schools near Seattle.

Several items concerned a teacher's attempts to improve his classroom effectiveness. The faculty at our school reported that teachers would

(4, 5) ask others, including the principal, to observe their teaching and have a conference afterward; (6) ask to observe a colleague's teaching to get new ideas; and (7, 8) approve a teacher who did these things in significantly greater numbers than the faculties of the other schools.

The remaining four items showed no significant differences. These results indicate that teachers at the experimental school were willing to share new ideas to a greater extent than teachers in schools where no organizational training had taken place. Furthermore, teachers at the experimental school were willing to take greater risks to improve their teaching effectiveness.

Lessons for Consultants

In this section we discuss what the consultant can learn from this project to help himself design interventions to improve the organizational functioning of school faculties.

SPECIAL NATURE OF THIS INTERVENTION

The training events in our intervention were aimed at improving the organizational problem-solving of a school faculty. The feature that most sharply sets this intervention off from other laboratory training events is that natural work-groups, not individuals, were trained to be more effective. The intervention attempted to influence ways in which the entire faculty or its subgroups carried out their job-related tasks in the context of the school. This was, in other words, a training intervention pointed toward organizational development, not personal development.

At the same time, it is an inescapable truism that role occupants are persons and that the trainees are persons. It is only an abstraction—a way social scientists conceptualize things—to say that roles are different from the persons in a particular organization. Persons sometimes invest so much of their personal existence in a role (and this is perhaps particularly true of educators) that strong emotional reactions enter into organizational change of any kind. But although people's emotional reactions must be considered in designing even *organizational* development, our target remained fixed on roles and norms and their relationships. Our conception of organizational training aims at rearranging, strengthening, or in some way refurbishing the relationships among people in various positions in the school.

EVALUATION OF OUTCOMES

From the point of view of research, we hoped to learn whether improved organizational problem-solving could be produced by carefully

integrating training in communication and problem-solving skills within the context of the living school, beginning the training just prior to the opening of school and continuing intermittently for some months. We interpret the data to support the claim that a number of desirable outcomes were at least partly due to our intervention. Many teachers began using a greater variety of more effective group techniques in their classrooms. Collaborating subgroups of teachers increased in strength and number. The Principal's Advisory Committee became potently and specifically representative rather than merely advisory. Faculty turnover decreased well below the rates at the other junior high schools in the district. Additional training in organizational development following our intervention was initiated by the faculty; several staff members, including the principal, sought training for themselves in communicative skills and group dynamics. The district established a new variety of vice-principal modeled from a role fashioned at the school after our intervention; the definition of the role included skills in group development and problem solving.

STRENGTHS OF THE SUMMER WORKSHOP

These outcomes indicate that improvements occurred in the school. We believe that the summer workshop was crucial in starting the project in a productive direction. Aspects of the design for a training activity like this one can be divided into macro and microaspects. Macroaspects include the design's overall structure and outline, its sequence of parts, and the general forms through which the individual activities flow. Microaspects refer to the specific activities played out during any limited period. We feel confident in offering the following features as the most successful macroaspects of the summer workshop.

Including all members of the faculty. Almost the entire staff was included in the training from the beginning. This meant that everyone learned about the goals of this training at the same time, that all were in the same circumstances vis-a-vis coping with the training activities, and that it was easy to transfer what was learned during the week to the school situation because staff members could remind one another of what happened at the workshop. The importance of everyone's attending was underscored later when the two staff members who could not attend posed significant barriers to the staff's further development.

Even a few days difference can create distance and cause barriers between the trained and untrained. Perhaps the main reason is that one can feel a threat when others, especially those in roles comparable to

one's own or those in roles that are removed only by one hierarchical level, develop skills or procedures that they might "use on you."

The faculty of an average elementary or junior high school has no more than three levels of hierarchy: administrators, teachers, and nonprofessional personnel. For many purposes there are only two layers: the administrators comprise one and the teachers and nonprofessional personnel the other. Such an organization is closer to a primary group than it is a bureaucracy. In a primary group, where role-takers relate to one another with more emotionality and individuality (compared to a more formal bureaucracy), there is no reasonable or legitimate way in which some can be chosen for special training while others are left out.

Structured skill activities. The macrodesign called for a sequence of training events that started with games and structured skill activities and moved to first steps in solving real organizational problems. This sequence seems to have worked well in two ways.

First, we think that faculty members who attend a training event as a duty rather than by self-selection find their ways into new interpersonal modes more easily by structured skill exercises than through less structured exercises demanding more personal commitment such as the traditional T-group. The skill exercises were chosen because each one demonstrated organizational issues reminiscent of role relationships in the school. An unstructured T-group probably would have led into considerations of particular interpersonal relationships within the staff; these, we believe, would have set the stage for personal development orientations and would have led away from a focus on organizational problems.

Second, the results of the exercise led rather naturally into back-home problem-solving and seemed to set the stage for the choices of increasing role clarity, using staff resources, and increasing staff participation at meetings. Unstructured activities probably would have pointed toward work on relationships among certain persons and led away from our goal of working at the organizational level.

Rotating subgroup membership. The macrodesign called for staff members to rotate through groups of different sizes and compositions during the first few days. This was to increase the potential network of workable relationships on the staff and to decrease the possibility of an ingroup, outgroup pattern emerging. Another goal of such rotation was to increase members' identification with the staff as a whole. We thought that some degree of identification with the whole staff would be necessary for the motivation required to carry the project through the

year, and rotating subgroup memberships appears to have increased faculty cohesiveness.

Equal treatment to all ranks. The design consciously contrived to reduce status differences on the staff. No member was singled out for special treatment. Rotating the staff through various groups brought together nonprofessional personnel, teachers, and administrators. The exercise emphasized that persons within groups carry out tasks and that one attempts to do the best he can on a given task regardless of who happens to be in his group. Such an assumption brought staff members closer together—a prerequisite to achieving more openness and clearer communication.

Exemplifying new organizational forms in the training. Group processes, new group forms, and procedures for problem solving were introduced in the design with the assumption that the use of such procedures by staff members would lead to new organizational structures. We believe that the macroaspects of the design encouraged that to happen.

Several microaspects of the design for the summer workshop warrant special attention because of their positive effects on the faculty.

The fishbowl. The fishbowl arrangement, in which a group on the outside of a concentric circle observes a group in the inside working, became especially useful to this faculty. The arrangement used most often called for two or three empty chairs left in the inside group. Members of the outside group were invited to enter the inside when they chose to communicate something to the insiders. During the summer workshop, this pattern was used in the problem-solving phase late in the week. Later, in a followup session when the Principal's Advisory Committee met in front of the staff, the formation was used again. We learned that the faculty spontaneously employed such a formation several times during the school year to increase communication flow and participation between groups.

Two-way communication. In several activities during the training we emphasized the importance of two-way communication. The impact on the faculty was great indeed, for it especially affected the shape of the area coordinators' role. They were encouraged by their colleagues to serve as communication links between the Principal's Advisory Committee and the area groups. Learning about new processes had motivated structural change. The new structure was similar to the *link-pin* organizational structure described by Likert (1961). His structure uses small face-to-face groups as multiple-path communication channels in them-

selves; work units are organized across hierarchical levels and members participate in group decisions at levels both above and below their own. In our school the coordinators were to represent their area colleagues in the Principal's Advisory Committee and to communicate its actions back to the members of their area.

Systematic problem-solving. Working through the problem-solving process step by step was another important microelement. We returned to this problem-solving sequence often. It became a convenient device for staff members who could easily keep the stages in mind and, in fact, made use of several of them spontaneously during the school year.

STRENGTHS OF THE TRAINING DURING THE SCHOOL YEAR

Next we wish to describe the things we believe went especially well during the remainder of the intervention period. Five training activities stand out as crucial aspects. One was the fishbowl technique which we have already mentioned. The other forms included:

Interviews after summer training. The interviews brought our training staff psychologically closer to the faculty and gave us several key ideas for designing training events during the school year. We interviewed staff members during their preparation hour. We interviewed some in groups and others individually. Where we seemed to get contradictory comments, we tried to probe for clarity or to go back to a person who had been previously interviewed to ask a few more questions. We tried to keep the interview process open to easy surveillance. All staff members knew that we were at the school on the day of the interviews, the interviews were held in accessible areas in the school such as the teachers' lounge, and staff members were invited to listen in while others were being interviewed.

Problem solving in natural groups. During the first followup training session we arranged meetings of the area groups and asked them to carry out the problem-solving procedure. This simulation of a real meeting was important in transferring learnings about problem solving to new group procedures in the area groups during the school year.

Review of progress before departure of trainers. A significant contribution to the total design occurred during the February followup session when the staff reviewed how far they had progressed toward solving their basic problems of role obscurity, low use of resources, and

lack of participation at meetings. The session had three helpful effects: (a) It encouraged continuing discussions and collaborative problem-solving that had just begun to emerge; (b) it helped faculty members to recognize that they already had accomplished many positive things; and (c) it helped set the stage for a graceful departure of the training staff without also indicating that the project was over.

Final unstructured session. A significant event in the total design was the unstructured session, in the manner of a T-group, held for a complete day with the Principal's Advisory Committee. Members of the committee originated the session. Involvement on the part of most was high and the results led to a strengthening of the group.

WEAKNESSES IN THE SUMMER WORKSHOP

Certain features of our design were noticeably weak. We mention below some features we think could be improved in another application.

Making specific plans. First, we believe we should have encouraged the faculty at the end of the summer workshop to commit themselves to more specific and concrete action steps to be used in specific problem-solving processes. In essence, the problem solving was learned as a process and used rather well later in the year; but more gains in terms of concrete actions could have come from the problem solving if the faculty had been able to use action steps started at the workshop as a springboard.

Dealing with absent persons. The two staff members who didn't attend the summer workshop never were brought into the training psychologically. An attempt was made to bring one in by conducting a discussion about the workshop with that person and three of her closest associates. At that meeting events of the workshop were interpreted and feelings within the group appeared to be supportive and positive. However, little improvement seemed to occur after that meeting. In retrospect, we feel that a session should have been designed in which the problem of informing those who were not present was dealt with openly and skillfully.

Information-gathering techniques. The problem-solving sequence didn't pay attention to concrete techniques for diagnosing organizational processes. The training could have included some diagnostic tools in the form of self-report questionnaires, brief but systematic interview schedules, and categories for observation that staff members could have used during the year to diagnose their own organization.

WEAKNESSES OF TRAINING DURING SCHOOL YEAR

Three things may have had adverse effects during the school year.

Demands on personal energy. Many teachers came to the training sessions after a difficult week of teaching. The training events constituted additional burdens. We are considering ways of arranging to have training episodes occur within the context of the school day. We are having some success with meetings during free periods and by using substitutes to free participants. We are also making use of vacations and the weeks before and after the school year.

Changing trainers. Only two members of our training staff remained throughout the project. At times the faculty were not sure who were on our staff and who were not.

Clarity of expectations among trainers. Along with our own staffing difficulties, it should be pointed out that our training plan often was not extensive and at points not sharply enough defined. This led to uneven performances, especially in subgroups within the faculty, when different trainers were involved. We tried to correct for this by rotating trainers continuously.

In conclusion, this project was salutary for a school faculty and contains valuable lessons for consultants or change agents. For us, it serves too as a preface to a series of forthcoming interventions in schools with different structures.

2

Theory and Design

THE special concern of this project was to help the members of the Highland Park School staff alter their group processes to become better problem-solvers. We intended to increase the ability of the faculty to draw on different sectors of their internal and external resources to meet different problems. Flexible organizational problem-solving would be demonstrated by the staff identifying the distinctiveness of different problems, defining appropriate resources for confronting the problem, locating relevant resources, and marshalling those resources so that they were brought to bear effectively.

We assumed that the organizational processes of a school, especially those involving resource utilization and decision making, set the stage both for successful instruction and for successful innovation. We postulated some form of organizational training for group development to be a necessary intervention if Highland Park was to achieve a new level of resourcefulness in group problem-solving. Our purpose was to test

whether improved problem-solving in the faculty could be produced by training in interpersonal processes where the group processes to be altered and the methods of doing so were carefully chosen according to some specific theoretical principles of organization and motivation.

Using Resources and Making Decisions in Organizations

Many educators and educational critics have tried to explain the major problems of public education by emphasizing the inferior nature of resources instead of focusing on the *process* of using resources. For instance, youngsters from culturally disadvantaged environments are often viewed as causing many of the significant problems of urban schools. Their families and neighbors are seen as having provided an inadequate child-rearing process which has made the child unsuited for school. Poorly trained teachers have been singled out as being incapable of operating effectively with students. The argument is made that school-teaching attracts the less-capable college students who then receive an inferior education from poorly prepared college instructors who know little about the realities of the classroom.

Other inferior resources sometimes discussed are inadequate curriculum materials, teaching aids, or the classroom itself. The point typically made is that even the best students and the most capable teachers cannot produce well-educated citizens when curriculum materials are not of high quality, abundant, individualized, well-programmed, or are not accompanied by audio-visual aids. In all these examples, the lack of resources, human or nonhuman, is viewed as the reason for poorly educated students.

The quality of a resource is important. However, more attention should be placed on improving group processes in schools than they now receive; for it is the interaction of students, teachers, and curriculum materials in all their various interrelationships that determines the efficient use of the school's resources.

We believe the energies of school administrators are spent inappropriately if they are used primarily in improving the resources. Naturally, the administrator should strive to obtain teachers and curriculum materials of the highest quality; but he should be more concerned with the interaction of these resources. To the extent that he is able to work efficiently in maximizing production from whatever resources he is given, we would declare the administrator to be an effective leader.

The school is more than simply the sum total of its individual members and curriculum materials. The staff has different characteristics

from those of its individual members; and, if it is effectively managed, it may be more productive than would be expected from a simple summing up of individual resources. The school is a complex social system stabilized by role expectations and interpersonal norms. Individuals within the faculty behave predictably largely because of their adherence to shared expectations for what is appropriate in the school. Norms are compelling stabilizers because individuals in the school monitor one another's behaviors. It is the strength of shared norms that makes a school organization so resistant to modification. But at the same time, this strength offers a tool for planned change. If organizational change in the school is to be viable and stable, changes in interpersonal expectations must be shared so that each person knows that his colleagues have changed their expectations in the same way that he has changed his own.

Decision-Making Styles

Three decision-making styles occur often in groups: (1) decisions made by a single person or a minority, (2) decisions based on the ability of a majority to overrule a minority, and (3) decisions based on support and agreement of the total group after debate and discussion. While it is difficult to obtain these decision-making patterns in their pure form even under controlled laboratory conditions, studies by behavioral scientists indicate that each has a different effect on a group's performance. Decisions based on the minority subgroup style (which is the style most frequently used in everyday life) are the least effective in using member resources, obtaining the commitment of members, and reaching high-quality decisions. When the number of members contributing to a decision is low, the final decision depends on the limited resources of a few. Generally, the minority does less well than the total group both because it usually does not have as much resourcefulness as the total group and because mutual probing and stimulation are missing. This is true especially in complex organizations such as schools, where the central tasks of the organization cannot be carried out in a small face-to-face group involving most of the members.

The majority-vote style relies more on the combined effects produced by interaction and the resources of most individuals. As such, it is superior to the minority style in producing effective decisions. However, some assets are still being wasted when the majority vote is used. To the extent that the outvoted or noninvolved minority is unable to use its resources or to influence the decision, some resources are still not being brought to bear on the decision.

The decision-making style of group consensus represents a pattern of interaction in which all participants contribute resources and all share in the final decision. No decision becomes final which cannot meet with the approval of nearly all members; for this reason, consensus is difficult and sometimes impossible to obtain. It requires a fairly advanced skill in two-way communication, coping with conflict and using individual resources. Observations indicate, however, that the consensus style, when applied to complex problems requiring complex interpersonal coordination, results in decisions of superior quality, decisions which are also usually well implemented.

The findings of behavioral science argue that it is possible to create relationships among individuals comprising a face-to-face group so that the group exhibits properties different from, even directly opposed to, those properties to be observed in typical committees, staff groups, or task forces in everyday organizational life. The more effective groups have leaders who allow for greater participation, initially wider divergence of expressed judgments, and greater acceptance of diverse decisions (Torrance 1957). Moreover, effective leaders have been shown to encourage minority opinions and conflict to a greater extent than less effective leaders (Maier and Solem 1952). Also, it has been shown that group participants with little influence over a decision not only fail to contribute their resources to a decision but usually are less likely to carry out the decision when action is required (Coch and French 1948).

Attempting consensus is probably the least frequently used form of decision making in schools. One attraction the majority-vote style holds for administrators is that it easily disguises and avoids the conflicts that result from differences of opinion. In circumstances when pronounced status differences exist among staff members, the minority style may be employed to short-circuit conflict and save time. While consensus usually does result in a more resourceful decision, it is not designed to avoid conflict or to overcome group resistance in the short run; therefore it is frequently discounted as unfeasible and impractical. However, decisions concerning instructional matters could be more effectively made if staff members were able to stimulate and encourage use of one another's resources in the process of decision making.

Paraphrasing McGregor (1967, pp. 29-30), consensual groups can make decisions that are effectively implemented without the necessity for external pressure or surveillance. They can be creative and innovative; they can operate efficiently; they are not usually crippled by disagreements or hampered by dominant personalities. Pressures for conformity can be minimal, and the knowledge and skills of each member can be

effectively utilized. The outputs do not have to be mediocre, least-common-denominator compromises, but can often yield decisions and problem-solutions at a general level of performance superior to the sum of the outputs of the individual members operating separately.

SYSTEMIC FUNCTIONING

If the resources of a school organization, both human and otherwise, can be brought to bear effectively upon whatever problems arise, the school stands a good chance of adapting successfully to its changing environment. But if heightened ability in using resources is to be maintained, it must be institutionalized.

(We shall use some of the language of general-systems theory to discuss in more detail the maintenance of adaptability in an organization.)

A school is not a static system; it is not merely a system in motion, nor merely a moving system of living creatures. It is a system in multiple and differentiated processes; one of the essential processes is the feedback that *changes* the mode of interaction of the system with its environment to maintain goal-directedness. And every time the feedback process results in a new strategy for equilibration, the system has altered its structure by that much; therefore it is a new system by that much. Consequently, every complex, adaptive system is not merely static, not merely equilibrating, not merely homeostatic, but inherently structure-changing. This inexorable change in structure, whether it occurs slowly or rapidly, Buckley (1967) calls morphogenesis.

We see the following characteristics of organizational systems as crucial to the design of interventions intended to move the organization toward greater capacity for self-renewal. First, organizations are not to be distinguished from the rest of society only by their functions; rather they constitute special densities of communication and purpose within society. In a human organization boundaries are sometimes sharp and sometimes so vague as to be hardly boundaries. But the key feature of the boundary is that some specified type of communication crosses the boundary with greater difficulty than it moves on either side of it. Effective intervention begins by ascertaining the boundaries or communication-links where the gradient of relevant communication sharply decreases. It proceeds by influencing *all* the components within the boundary in a balanced way.

Second, we take a school's effectiveness to be its success in approaching some specified goal.

Third, we assume for the present that it is possible in some practical

sense to characterize schools as subsystems performing one or more educative functions. Further, we assume that it is possible within most schools and districts for people to reach a consensus about the desirability of one or more of these functions or goals.

Fourth, a school organization must be able to specify its criterion of effectiveness to produce outputs that match it. An effective intervention finds and makes clear the statement of this criterion. If none is found, it helps a school or district to specify one or more criteria for effectiveness, or a criterion for progress, or moving toward a solution of a problem.

Fifth, an effective organization must have a mechanism for judging whether its actions are resulting in movement toward or away from its criterial state. An effective intervention, in other words, helps an organization establish feedback loops.

Sixth, a school organization, meaning a system, makes its meaningful actions not within individuals, but within subsystems. Consequently, to build in the capacities described above, an effective intervention will teach *subsystems* to behave in ways that will establish the new functions within the organization. In a school or district a subsystem shows itself in a group interacting with the organization as a whole, along with the relevant physical equipment necessary to maintain the particular *function.* Examples are the faculty of a school, the principal and his advisory committee, the teachers in a department of a high school, the student body, a clique of students, the performing orchestra, etc. But sometimes components performing a function are not easily seen as clustered; making a decision (in the sense of acting in a new way) sometimes requires the collaboration of principal, teachers, counselors, and students.

Still following general-systems theory (e.g., Buckley 1967), a system that is to maintain a particular function in interaction with its environment must itself be able to adjust its manner of interaction as the environment changes. Consequently, no particular structure and procedure, no matter how well adapted to today's environment, is suitable in the long run. (And as social change accelerates, the long run becomes shorter and shorter.) Given this postulate, it follows that the organization that can maintain its function (pursue its goals) for any length of time must be a continuously adaptive organization that can change its mode of operating as its feedback and comparison processes tell it that it is becoming less effective in coping with its environment. An organization can achieve this adaptability two ways: (1) it can call in outsiders to help bring about change when it judges its effectiveness to be slipping, or (2) it can build in its "outsiders." It is our hypothesis, however, that a school organization can use the latter strategy only if it trains its components to

have a higher skill and coordination than has been typical in the past.

To design this training, we called upon the lore of applied group dynamics: for example, Bradford, Gibb, and Benne (1964) and Schein and Bennis (1965).

According to Douglas McGregor, an eloquent exponent of this kind of interpersonal training in application to organizational effectiveness, there are two different kinds of rewards to which persons will respond.

> The first . . . (concerns) what are called *extrinsic* rewards and punishments—they exist as characteristics of the environment and their relationship to behavior is relatively direct. Money is the most obvious of them, but fringe benefits, promotions, praise, recognition, criticism, and social acceptance and rejection are other examples.
>
> *Intrinsic* rewards, on the other hand, are inherent in the activity itself: The reward is the achievement of the goal. Intrinsic rewards cannot be *directly* controlled externally, although characteristics of the environment can enhance or limit the individual's opportunities of autonomy, of self-respect, of solutions to problems, as examples. So are some of the rewards associated with genuine altruism giving love and help to others. (p. 7)

McGregor argues that administrators should seek to create environments in which all members

> . . . can best achieve their own goals by directing their efforts toward the goals of the organization. With respect to lower-level needs, this places before management the task of providing extrinsic rewards, *on an equitable basis,* for all kinds of contributions to the success of the enterprise.
>
> With respect to higher-level ego needs (and some middle-level social needs) management's task is to provide opportunities for members of the organization to obtain intrinsic rewards from contributions to the success of the enterprise. Since management does not directly control such rewards, the problem of equity in their administration does not arise. The task is to provide an appropriate environment—one that will permit and encourage employees to seek intrinsic rewards *at work.*
>
> Often the provision of opportunities for intrinsic rewards becomes a matter of removing restraints. Progress is rarely fast because people who have become accustomed to control through extrinsic rewards exclusively must learn new attitudes and habits before they can feel secure in accepting opportunities for intrinsic rewards at work. If there is not a fair degree of mutual trust, and some positive support, the whole idea may appear highly risky to them. (pp. 13-14)

Substantial research evidence shows that men experience intrinsic satisfactions in at least three domains (see, for example, Foa 1961). These are identified by different labels by different theorists and research-

ers, but we can summarize them in the following ways: (1) achievements, also labeled curiosity, exploration, or activity; all are related to man's motivation for accomplishing something through his own effort and performance; (2) affiliation, also delineated by some as the interpersonal dimension of love, indifference, and hositility; men strive to be loved by or at least to be personally related to some others; and (3) influence or power, which has also been described as the dimension of dominance-submission.

All interpersonal relations and the motivations involved with them can be construed as having achievement, affiliation, and influence components. Emotional experiences can become problems when any of these motivational states is frustrated. Typical emotional frustrations are feelings of inferiority, worthlessness, being "put down," loneliness, betrayal, lack of interest, and dullness; these feelings, in turn, prevent people from making maximum use of their potentials whether emotional, cognitive, or motoric. It is impossible to arrange human affairs to eliminate emotional frustrations. It seems to us, however, that it is possible to bring about organizational norms and procedures that will mobilize emotional states for productive ends and make it more likely that debilitating emotional orientations can be reversed without resorting to expensive "cures" like dismissal, extra-long vacations, job transfers, or psychiatric therapy.

Feelings of achievement or self-accomplishment can be harnessed productively when the participants in an organization have a clear conception of one another's goals. Ambiguity about expected outcomes is more emotionally frustrating than being in conflict over goals. In the latter instance, persons can gain security by realizing where they stand in relation to others. Ambiguity, however, reduces the likelihood that feelings will be associated with a clear referent and will be more generally and diffusely experienced. Affiliative feelings can be gratified through building a cohesive unit in which persons find friendliness and the reciprocal exchange of support and warmth. Feelings having to do with power can be satisfied through the organization's allowing for influence at all levels. Such a dispersion of influence will facilitate the open expression of frustration. Finally, all emotional states are potentially harnessed through taking a problem-solving orientation to organizational life.

(The theoretical views sketched in this chapter will be elaborated in later CASEA publications issuing from this series of projects in organizational development.)

General Design

We postulated some form of organizational training to be a necessary intervention to change norms and interpersonal expectations at Highland Park Junior High. The training events were designed to help the faculty become more aware, open, and analytic about communication patterns, interpersonal problems, and organizational processes. The goals of the August-to-February training program were to help staff members (1) identify publicly some problems of communication among themselves; (2) use a systematic problem-solving procedure to improve communication; (3) relate improvements in faculty communication to student-teacher relationships and classroom instruction; and (4) establish a continuing program of activities for improving staff communication.

The training events were designed not to have their primary effect on individuals, but on the actual, intact faculty as a working group. Almost the entire building staff was included. There were fifty-four trainees: all the administrators, all the faculty but two, and the head cook, head custodian, and head secretary. Participants rotated from group to group to make it possible for them to gain a more comprehensive identification with the entire faculty. Finally, we spaced the training over the greater part of the school year so that the orientations and skills learned during the first (and most concentrated episode) could be guided in direct application as well as periodically refreshed and redirected.

Our design contrasted with strategies using a subpart of the organization as an entering wedge and relying upon that trained unit to bring about further change. For instance, our approach was different from one in which the principal and vice-principal might receive special leadership training and then, because of their formal position in the school, be expected to be able to modify staff patterns. It was also different from the design where teams of administrators and teachers are specially trained as change agents and expected to involve the rest of the staff in a program of innovation. In both cases the strategies risk creating a communication barrier between an ingroup and an outgroup; one group has received special training and has been "anointed" by outside consultants while the other group is still the "old bunch."

Such intergroup dynamics are visible in human-relations laboratories between T-groups, and we believed they could easily emerge at Highland Park if any one part of the staff was singled out initially for special training. Also, because of the nature of role expectations and norms, as well as our view of the ineffective results of piece-meal approaches to organizational change, we decided to work with the entire faculty throughout the

training and, most importantly, to emphasize the whole rather than parts at the beginning phases of the training.

At the same time, we were aware of the important role played by the principal and area coordinators* in allowing for change and in supportively maintaining organizational revisions and development. Consequently, we planned to emphasize these roles in later training, and (as it turned out) these roles played an even bigger part than we originally expected.

Perhaps our clearest perspective prior to the project was our view of transfer of training. The ultimate training goals were to equip this staff with knowledge, attitudes, and skills that would allow them to function more effectively in the day-to-day operations of the school. On the one hand we thought that we had to remove the Highland Park staff members from their work-a-day worlds, at least for a brief time, to help "unfreeze" daily sets, expectations, and patterns and to help them take fresh looks at themselves, their colleagues, and their back-home situations. On the other hand we were aware that transfer of laboratory training is optimal when new skills and organizational patterns are learned in virtually the same situations as the ones in which they must be applied. We believed, therefore, that our design should combine the use of a retreat early in the training sequence with planned and systematic insertions of the real world of the school.

Transfer to the school world was enhanced by having the entire staff at the training events. Even when training events involved interpersonal exercises and group games which were not like patterns played out during the school day, staff members still behaved and acted in clear view of their colleagues. There could be no hiding in any of the training events lest even the hiding take on meaning to others on the staff. This means that our design required an introductory phase in which all participants might become tactfully involved and personally interested in risking new behaviors in front of their colleagues. Because of this, the organizational family nature of this training project was both the most advantageous and the most difficult aspect in developing concrete plans for the training events.

HYPOTHESES FOR THE TRAINING

Some of the guides for designing our study were hypotheses, since we

* At Highland Park the duties of the area coordinator were to bring together the efforts of the teachers of a particular academic area such as language arts, mathematics, physical education, etc. They had limited powers over budget and personnel but no evaluative function as is often implied by the title "department head."

did hope to test them in the sense of trying something not attempted in just this way before. We could not test certain hypotheses, though very important, within this one study; we could test them only by comparing our results with those from other studies using different techniques. For example, we could not test the hypothesis that training the entire school staff at once is more effective than training parts of it in sequence because our limited resources ruled out a comparison school. However, in the sense that our results can be compared to those of organizational training in instances reported by other investigators, where only parts of an organization were trained, this study does constitute a test of the hypothesis, even if an imprecise one.

Some other hypotheses that we thought would be testable in a year's time are:

1. *The Highland Park school will establish a continuing series of activities for improving communication.*

   In this hypothesis we emphasize our expectation that the Highland Park staff members would become more aware of the delicacy of effective communication; that they would come to believe, so to speak, that the price of effective communication is eternal practice. Consequently, we expected that they would initiate recurring events, forms, and training that would renew communication skills or offer opportunity for their continual practice and development.

2. *Participation in group meetings and initiation of influence attempts will become more widespread among the staff.*

   The emphasis here is on broadening the base of contributions to group problem-solving. More people than formerly would express themselves and try to have an effect on events. This would be especially visible in formal meetings.

3. *Frequency of discussion among the staff about interpersonal relations will increase.*

   The emphasis of hypothesis 3 is on the increased public expression of interpersonal processes that may be causing problems among the staff.

4. *The staff will either invent new forms of organization within their school or borrow some forms from our training and make use of them.*

   Hypothesis 4 states that faculty members would use differ-

ent group procedures to solve staff problems than was previously their custom and that some of these would be similar to those introduced in the summer workshop and training sessions during the school year.

5. *The staff will develop more productive working relationships between formal role levels.*

   Hypothesis 5 is focused particularly on relationships between such role and role-sectors as administrators vis-a-vis teachers, teachers vis-a-vis the kitchen, the physical education department vis-a-vis other teachers, and the area coordinators vis-a-vis one another. We especially hoped to improve the interpersonal effectiveness of relations between principal and teachers.

6. *When a proposal is initiated by a staff member, he will more frequently test his idea with a formally established subgroup before his idea is taken to the administration.*

   This hypothesis indicates our attempts to establish strong links between administrators and teachers by strengthening the problem-solving effectiveness of small groups of teachers. The interest was in increasing the frequency with which a group of teachers (or its representative) could go to the administration with a constructive plan.

7. *Some of the new forms and methods will have effects on classroom instruction.*

   The focus of hypothesis 7 is that teachers would, because of improved staff relations, have more energy for their teaching; they would thus make better use of the human resources in the school so that the instructional changes would have positive effects on students.

8. *Some of the new forms and methods will occur spontaneously.*

   We hypothesized that the faculty, after our intervention, would not only be able to recognize new organizational forms and methods, and find such devices acceptable when offered to them, but they would originate and use them without any immediate offers or prodding from outsiders. This ability to develop spontaneously new ways of dealing with problems is evidence of capacity for self-renewal.

Each of the eight hypotheses above should be understood to be pre-

ceded by the words, "given our style of intervention." By our style we mean a design for intervention based on the theory given earlier and showing the characteristics and training goals to be enumerated in chapter 3. We do not claim, however, that the particular interventions we used with Highland Park, in all their detail, are the *only* interventions that could produce the hypothesized results.

OVERALL EVALUATION

The organizational changes that occurred during the year were documented through questionnaires, interviews, written reactions, and observations. The project was also evaluated with a pretest-posttest design which included several comparison schools. Before the first training event, and again at the end of the school year, participants filled out self-report questionnaires on their perceptions and attitudes toward staff meetings, about the principal and his role behavior, and about staff communication patterns. Collections of data from Highland Park took place as follows:

1. Pretest questionnaire data were collected in August of 1967 at the beginning of the summer workshop.
2. Further pretest data were collected on the last day of the summer workshop.
3. Postworkshop reactions were gathered during early September of 1967 in interviews with all staff members.
4. A two-hour interview was held with the principal of the school to assess changes from the administrative point of view in late September, 1967.
5. During October, 1967, staff members prepared essays on their responses to the summer program and what effects they viewed the workshop as having on other staff members.
6. Throughout the year observations were made of committees and area groups in work situations.
7. Interviews were held with all staff members during winter, 1968, about how they were using the training experiences and what problems still existed.
8. Further data were collected by means of questionnaires left with the Highland Park staff on December 2, 1967, after the second training intervention.
9. Posttest questionnaires were collected in May of 1968, some three months after the last training event.

We were not able to conduct a project that included junior high schools in which visits from outsiders took place as in Highland Park, but where organizational training did not take place. However, data were collected in other junior high schools that reasonably could be compared with data collected in Highland Park. Some of the questionnaire items used

in Highland Park were also used to collect data from four junior high schools near Seattle in January of 1968; and other questionnaires used in Highland Park were also used in six junior high schools in the New York area, both in pretests and posttests, by the Cooperative Project for Educational Development.

Chapter 3 will describe the design and conduct of the first training event—the summer workshop held before the opening of school. The reader who is curious about the history of the total project will find a narration of antecedent events, along with information about the community surrounding the Highland Park School, in Appendix A.

3

Training in the Summer Workshop

IN designing the summer workshop, we took certain principles for granted without providing for any test of their validity. The following list of assumptions is not exhaustive but includes some of the more important ones we made about the training design. Any one of these could be converted to a hypothesis in another study.

1. The intervener must begin by attracting the interested nonhostile attention of the members of the organization. The first communication offered by the intervener should pose for the members of the organization a discrepancy or problem that asks for solution.
2. Transfer of skills to situations outside the workshop will be facilitated if participants not only practice the skills but then conceptualize them by talking with each other (after having practiced the skills) about what they had done and the possible application of the skills to the school.

3. If the faculty is trained in a series of overlapping small groups, staff members will be able to transfer the skills learned in one group to the skills learned in the next group and, subsequently, to the groups in which they work ordinarily.
4. Application to ordinary daily work will be maximized if the faculty deals with real problems during the summer workshop.
5. The transfer to everyday work will be maximized if the training staff makes known its expectations that the faculty will continue problem-solving activities in their daily work after each training event.
6. Transfer to everyday work will be maximized if the training staff makes it known after the summer workshop that they will return later in the year to conduct more training events.
7. Transfer will be maximized if the summer workshop leads into other training events to be held some weeks and months following the first workshop.
8. Communication and the feeling of solidarity within the faculty will be increased if the training design brings everyone into face-to-face interaction as well as giving special training to powerful groups.
9. Differences in the power held by individuals within the organization could inhibit or distort communication in group work during the workshop. Therefore, designs for group work must provide for overcoming this inhibition or distortion.
10. It will be easier for staff members to practice new kinds of interpersonal skills if they undergo their first practice away from their daily work.

Activities and Goals

The workshop put in motion activities to increase the shared knowledge among the staff members about what was possible within their organization; to increase the clarity about the more significant norms existing within the staff; to exploit and explore the problems that existed with regard to communication and decision making within the staff; and to set in motion some tentative working solutions to organizational problems through systematic group problem-solving.

Through the activities of the summer workshop, we hoped to reach certain goals by its conclusion. These goals would take the form of certain conditions or skills as follows:

1. Increased openness and ease of interpersonal relations
2. A feeling that clearer and more effective staff communication had been demonstrated.
3. Increased willingness and skill in giving information to others about their behavior and receiving information about one's own behavior
4. Increased awareness of interpersonal processes when they were taking place
5. A widened and shared perception by members of the staff of some new varieties of organizational patterns
6. A skill in using a systematic problem-solving procedure (to be described below)
7. An increase of skill in sharing initiative, that is, skill in helping a colleague who has enunciated an idea to develop it into a practical plan for action

Narrative

A training staff of five met at noon Sunday, August 20, 1967, on the campus of a small college a few miles from Highland Park School. That afternoon and evening they laid out details of strategy for the workshop. It began at 9 A.M. on Monday when the goals for the workshop were stated. Then the Highland Park staff filled out three research questionnaires: biographical information, school climate, and staff meetings.* We had been prepared to ask the staff to fill out a questionnaire describing their school principal, but we decided during our planning that this questionnaire was too "sensitive" to be used at first acquaintance. We decided, instead, to administer it at the end of the workshop.

THE TRIP ACROSS THE MOON

Actual training began with the exercise known as "The Trip Across the Moon," or the NASA exercise.

The Highland Park staff were asked to count off by fives, and they were thus formed into five heterogeneous groups of ten or eleven persons each. A general introduction to the exercise was given to the entire staff. They then formed into the five smaller groups, each containing one trainer. He passed out the necessary descriptive materials and made

* Data from the first two instruments were not analyzed. The instrument on staff meeting appears in Appendix J.

additional introductory remarks. Each group then went to work on its exercise.

The moon exercise is typically used to demonstrate the processes by which the resources brought to a group by its individuals come to be used or fail to be used by the group in solving a problem. We chose the moon exercise for this very purpose. We wanted, first, to attract the attention of the group to interpersonal processes and to our roles as trainers. Second, we wanted the participants to perceive for themselves a discrepancy that would leave them conscious of a dissatisfaction with the present state of affairs. This much dissatisfaction among a majority of the participants, we believed, would provide adequate motivation to carry the participants into the next exercise.

The moon exercise asks the participants to imagine themselves as members of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Because of mechanical difficulties, however, their imaginary ship was forced to land at a spot some 200 miles from the rendezvous point. During the landing much of the equipment aboard was damaged; since survival depends upon reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. The participants are given sheets of paper listing fifteen items presumably left undamaged after landing. The task in each problem-solving group is to rank-order the fifteen items according to their importance in helping the crew to reach the rendezvous point.

The exercise begins with the trainer asking each individual to make his own private rank-ordering of the fifteen items. The group is then asked to reach a consensual rank-ordering. The group is given some brief instructions to help them reach consensus:

1. Avoid arguing for your individual judgments. Approach the task on the basis of the difficulty of reaching the mother ship.
2. Avoid changing your mind *only* to reach agreement and avoid conflict. Support only solutions with which you are able to agree somewhat at least.
3. Avoid conflict-reducing techniques, such as majority vote, averaging, or trading in reaching a decision.
4. View differences of opinion as helpful rather than as a hindrance in decision making.

The groups were allowed approximately forty minutes to reach consensus before the results were tabulated. In each group one person served as secretary while the others called off their rank-orderings of the fifteen items. The secretary copied these down on a special sheet (see Appendix B). The secretary then averaged the rankings for each one of the

fifteen items and rank-ordered the averages, thus arriving at an average rank-order for the group. This average represented the rank-order that would have been obtained had the group spent their time voting rather than discussing. The secretary also recorded the rank-order that the group had reached by consensus.

All five groups had worked in one large room, gathering in circles as far away from one another as possible. When the secretaries had completed their work we announced to everyone that there was a correct answer to this exercise—correct in the sense that the exercise had been given to a number of NASA space experts who had come up with a rank-ordering which we would take to be correct. The secretaries wrote this rank-ordering on their sheets.

Each group then computed three scores by summing the discrepancies between the correct rank-order and three rank-orders that were already written on the secretaries' sheets: (1) the rank-order obtained through consensus, (2) the average rank-order of the group, and (3) the private rank-order of the individual who came closest to the NASA rank-order. Each group then could see whether its "best" individual, its averaged product, or its consensual product was superior. The groups were also interested, of course, in comparing their performances from group to group.

The results were typical of results obtained elsewhere with this exercise. Most groups found that their average rank-order was not so good as the rank-order produced by their best individual. Every group found that its consensual rank-order was better than its average rank-order; finally, most groups found that their consensual rank-orders were better than those of their best individuals. One group found that its consensual rank-order was not so good as the rank-order of its best individual; as might be expected, they immediately fell into a spirited discussion of how that could have happened. There was a wide difference between the consensual scores of the best group and the poorest group. This, too, caused immediate discussion. The sheets that had been given the groups for recording rank-orders were taped to the walls. After the general announcement of results, most members of the Highland Park staff walked about the room scrutinizing this display.

After lunch the five subgroups met again and trainers raised two types of questions.

1. What were your reactions to the exercise? How did you feel? What were you thinking?
2. How similar were our behaviors here to the way they usually

are in school? How different? What implications does this exercise have for our staff?

Next, each subgroup reported to the entire staff a summary of its reactions to what members had perceived going on in that group during the exercise. Each group chose its own way to report. Some groups elected a spokesman, while others held a group discussion for the general assembly. Trainers attempted to support openness and the giving and receiving of feedback during this session.

It was evident to many participants during the moon exercise that their groups were not operating with maximum effectiveness and these people made their opinions clear to their colleagues. It was also clear to many that making use of the resources available from the individuals in the group was not a straightforward thing. Faculty members also had little trouble in finding comparisons between their difficulties in solving the exercise problem and their difficulties in solving school problems. The trainers concluded that the moon exercise was an effective opener.

THE FIVE-SQUARE PUZZLE

On Monday night we began the five-square puzzle exercise to demonstrate coordination or cooperation in a group task and nonverbal communication. It was administered to participants in groups of five. Our fifty-four participants made up ten five-person groups with four participants serving as roving observers. The observers were instructed to look for ways that participants communicated nonverbally and also for ways in which cooperation in the groups was helped or hindered. We asked participants to sit at tables with several other persons with whom they had not been in a group during the previous exercise. We used a similar instruction at the beginning of most exercises throughout the week, thus insuring that everyone had a chance to work in some group with everyone else and also that everyone had a chance to experience what it is like to work in different-sized groups.

When the participant in the five-square puzzle sits at the table with the four other members of this group, he finds some flat pieces of plastic in front of each person. Most of the pieces are irregularly shaped. Person A has three pieces in front of him, person B has four, C has two, D has two, and E has four. (For other details on this puzzle, see Appendix C.)

Participants are told that there are exactly enough parts distributed among the five people to make five complete squares. The task is completed when a square is assembled in front of each person.

The rules are as follows: (1) each member must construct one square directly at his work place; (2) no member may talk, signal, or gesture in any way that would provide guidance, direction, or suggestion to any other group member; for example, no member may signal that he wants a piece from another member; (3) any member may give any of his pieces to another member; and (4) each member's pieces must be in front of him at his work place except one that he is giving to another member. Only giving is allowed—no taking.

This exercise is difficult and frustrating for individuals who are accustomed to managing others. It is also hard for those who are used to guiding themselves by watching for signals of the expectations of others, since the rules cut such signals to a minimum. To the extent that the rules are observed (and it is difficult for participants to apply this discipline to themselves) the exercise focuses the attention of the participants on discovering ways they can be helpful to others in completing the task. The most direct contribution a member can make is to look around the table for a place he thinks one of his pieces might fit and give that piece to the appropriate person—but he must then allow the other person to find for himself the way that piece fits with others in the place before him.

This exercise shows the great difficulties experienced in letting other people do things their own way. It also indicates the reliance we put on language to influence the behavior of others. Finally, it provides a useful amount of information about how group members act toward one another under the frustration the exercise produces. The stage of arranging the pieces into squares was called to a close after half an hour.

Next, we asked the ten groups to cluster into five larger ones, each containing two of the original five-person groups. Four of these new clusters were assigned one of the roving observers and each one of the clusters was assigned a trainer. The clusters, meeting in separate rooms, each used a fishbowl design with one group of five persons in an inside circle and the other group in an outside circle. The inside group was asked to reflect on what happened during the five-square exercise. Group members also received feedback concerning what they seemed to be saying from the people in the outside circle. The observer was asked to be alert for the immediate kinds of feelings being expressed in the group.

After each group had had an opportunity to sit in the inside circle, all ten persons discussed the implications of this exercise for relations among the school staff members in their daily work. Finally, the entire staff returned to the large assembly room and spent a few minutes ex-

pressing their thoughts about coordination and communication in problem-solving groups. The first day of work came to a close at 9 P.M.

NONVERBAL EXPRESSIVE ACTIVITIES

In contrast to the coordinated activity that took place within groups the previous evening, the activities of Tuesday morning focused more on the nonverbal expressiveness of individuals though the important part of the exercise lay in the kinds of communication that this nonverbal expressiveness was able to convey to others. The first five or ten minutes were spent in a simple body-loosening exercise in the large room where the meetings of all the participants took place. Each participant stood by himself far enough from others so that if he should swing his arms, he would not touch someone else. Participants were instructed to stand in one place, close their eyes, and let their bodies move in any way they wished to accompany the rhythmic music that was played during this brief interval. Judging by the vocalizations, a number of people enjoyed this. Only one participant withdrew from the exercise, expressing a feeling of impropriety about it.

The major part of the morning was spent using crayons and newsprint to express feelings artistically. In the first part of this exercise, we instructed each participant to go off with some crayons and a sheet of newsprint and make any kind of drawing on the paper that he felt would express his view of the Highland Park staff. After this, we arranged for participants to get together in groups of five or six to prepare among them a single artistic production or "mural" that represented as closely as possible their views of the Highland Park staff.

After a coffee break, the participants gathered into clusters composed of two mural groups—ten to eleven persons. The fishbowl design was used again in these clusters while mural groups described the meanings they felt they saw in the drawings. The trainer with each cluster helped the participants to maintain a "here-and-now" orientation and to explore feelings during their discussions.

The theory behind an emphasis on the present in contrast to other places and other times is that the central purpose of the workshop is to provide practice in conceiving of new alternative choices or actions and to practice those choices or actions in some way at the immediate moment —not merely expressing a pious intention to practice them someday. The empirical attitude is that if a new procedure cannot be practiced during the workshop, no one has any assurance that it can be practiced at some other time or place. Our training took the very practical attitude that if one deals with orientations, expectations, values, and feelings that

exist in the immediate time and place, one is dealing with things he can do something about; it is through steps taken now that a person or group moves into a revised future.

This does not mean, of course, that one must not think about the future to take intelligent steps in the present; nor does it mean that one cannot learn something from the past. It means that the most practical use of thoughts about past and future is made when the application of those thoughts to present possible choices is always made an explicit part of the conversation. The use of past and present must always be tested by voicing explicitly a question such as, "How does this help us to make progress on the task we have before us at this moment?"

Trainers believed that the "mural" exercise brought out several feelings about being a member of the Highland Park staff that might not have occurred in a more verbal exercise. There seemed to be many meanings both of a personal and a professional nature that were expressed, and there seemed to be a number of opportunities for reaching greater clarity about the kinds of coordination and communication that were helped or hindered by the personal and professional goals that individuals sought through their membership on the staff.

THE HOLLOW-SQUARE PROBLEM

After lunch we began the hollow-square exercise which focused upon the problems of using a formal hierarchy in group problem-solving. More specifically, this exercise simulates issues that occur when one group plans something for another group to carry out. Participants can learn about the processes of team planning, problems of communication between a planning group and an implementing group, and problems with which an implementing group must cope when carrying out a plan it did not make itself.

The exercise was carried out by clusters of ten or eleven persons. Each cluster was divided into three subgroups. Four people served as *planners*, four as *operators*, and the remaining two or three as *observers*. We explained that the planners would first decide how they would instruct the operators to do a particular task. The operators would be asked to leave the room while the planners were conferring. Then the planners would explain to the operators how to do the task and the operators would carry through the task as best they could while the observers watched the process, making notes of the efficiencies and difficulties. After explaining this general structure, clusters were designated, subgroups formed, and those participants designated as operators were sent out of the room.

The planning team sat around a table with fifteen pieces of plastic or

cardboard designed to form a hollow square. Each of the four members had three or four pieces of the puzzle. The planning team was given a drawing showing how the pieces were to be arranged to complete the puzzle. (See Appendix D.) Their key restriction was that individual members were not to put the puzzzle together themselves but were to think through the most efficient way in which the pieces could be arranged in a minimum of time to make the design. They could not move pieces themselves; they were only to plan. They were not permitted to give a drawing of the overall design to the implementing team.

The operating team for each planning group left the room before the planning began. They had no notion of what the exercise involved; but while they waited for instructions, they thought about and wrote out their impressions of how it felt to wait to be called on to do an unknown task. In the meantime, the planning team was given a written set of instructions telling them they had forty-five minutes in which to do two things—to plan how to fit the pieces to complete the puzzle and to instruct their operating team how to do this job. Precisely after forty-five minutes time was called; the operators went to work with no further instructions or help available from the planners. Observers watched both the operating team and the planning team, noting those things that helped and hindered the process at the planning, the communicating, and the implementing stages.*

Here are some kinds of learning that typically take place during the hollow-square exercise:

1. Planners tend to put limitations on themselves which are not inherent in the instructions, thereby making their task more difficult.
2. There is considerable frustration in planning something which someone else has to carry out when you yourself are restricted from doing the operation.
3. Planning is a seductive task which so absorbs the interest and attention of planners that they tend to forget what their operating team is experiencing. Operators tend to be anxious because the task is unknown, but this concern does not enter the minds of the planners.
4. Planners often fail to use all the resources at their disposal to solve the problem.
5. Planners frequently spend so much time planning the activity that they do not allow sufficient time to communicate their plans adequately to the implementers, resulting in the waste of much planning effort.
6. In communicating a plan to the operating team, planners typically

* We are indebted to Warren Schmidt for the general design of this exercise and for information about the activity that typically follows it.

fail to take into account the operators' anxieties, their needs for being physically comfortable in the environment, and so forth. In other words, their preoccupation with giving information under pressure tends to blind them to the needs which the operating team is experiencing, which is likely to reduce communication.

7. Planners are frequently inefficient in communicating their instructions—that is, they often depend solely on instructions in writing, which are sometimes cumbersome, rather than taking the time to give clear oral instructions.

8. Operators tend to develop some feelings of antagonism toward their planners while waiting for their instructions. This is particularly true with operating teams who are called into the room late by their planners after seeing the other operating teams being called in earlier. Sometimes operating teams set up their own organizational structure. That is, they select a leader who is to receive instructions and then give them guidance; but this whole structure is often ignored by the planners who never suspect such an organization exists.

When we were giving instructions, we urged the participants to think of the planners as analogous to administrators or department heads and the operators as teachers.

The trainers helped the participants find parallels between their reactions during the exercise and the ways they worked with each other in the ordinary school situation. Trainers believed that the parallels to the ordinary life of the school were striking.

LISTENING, GIVING, AND RECEIVING FEEDBACK

The session on Tuesday evening was devoted to training in communication skills. The session began with a few statements on the importance of clear communications and the difficulties of listening. Three trainers then sat in a conversational triad and demonstrated the listening skill of *paraphrasing* while the entire Highland Park staff surrounded the triad and observed them. The idea in paraphrasing is to enable the person who has spoken to you to give you his judgment of whether you are understanding him correctly. A good paraphrase is usually more specific than the original statement.

After the demonstration, the participants were put into groups of three and instructed to discuss problems of communication among the Highland Park staff. Each person was asked to paraphrase what the last person had said to that person's satisfaction before making his own contribution to the discussion. We emphasized that they try to make plain to the other person not only the cognitive messages that seemed to be coming across but the emotional feelings as well.

After practicing paraphrasing we turned to the skills of giving and receiving feedback. Giving feedback consists of describing the other person's behavior to him in objective terms without imputing motives to him. Effective feedback is descriptive of the other's behavior; it is not evaluative or analytic. Feedback also involves describing how the other's behavior causes one to feel. To be helpful, the person giving the feedback should check with the other as to his feelings. Being effective in giving and receiving feedback requires practice and cognitive understanding. We set out to build such skills in the members of the Highland Park staff.

After the participants had practiced in triads we asked the triads to cluster two at a time so as to produce a number of groups of six persons each. They helped one another give and receive feedback before we then asked the six-person groups to combine two at a time to form groups of twelve persons each. Similarly, these latter groups combined and then the still-larger groups combined until at about 9 P.M., these skills were being practiced in one large circle of the entire group.

DEVELOPING STATEMENTS OF FIVE PROBLEMS

On Wednesday morning we left gamelike activities and skill exercises behind and turned to problems actually existing in the school. The amount of time devoted to the exercises gave the participants materials to talk about that were not "sensitive." The discussions of communicative skills and interpersonal processes that took place during these games did not require the participants to open old wounds. But at the same time, they could draw parallels as close to their more ego-involving work at school as they wished.

We opened the session by dividing the staff members into five groups of about eleven persons each. A trainer was assigned to each group. We instructed each group to spend the next ninety minutes discussing pressing problems they saw in the school and to decide on a statement of one problem that they thought was worth spending time on during the rest of the workshop. Each problem was to involve an organizational issue. The problem was not to be one that a teacher could solve primarily within his own domain of power, such as a conflict concerning the students within his own classes. Each problem should concern the Highland Park School as a human organization. Students did not need to be ruled out as parts of the organization, but our suggestion was to deal with problems that involved relations among the adult staff of the school, whether or not these relations also brought students into the picture.

We also required of the participants that their problems be phrased descriptively, specifically, and behaviorally. We said that the statement

should be as objectively descriptive as possible. It should be specified; and it should be made in terms of actions or behaviors that were wanted or not wanted, not in terms of attitudes, qualities, or other conditions that did not specify behavior. Finally, each group was directed to elect two representatives who would present the problem to the entire Highland Park staff later in the morning.

This assignment was essentially one of stating issues of contention in the school, presenting individual ideas about the priority of these issues, and then arriving at a group consensus about a partial ranking or partial ordering of priorities. In these ways the activity was similar to the moon problem. However, the group had to generate its own list of items to be ranked because the problems involved here would be more diffuse and more difficult than the moon dilemma. Moreover, this activity called for a high degree of skill in making use of the group resources and of the techniques of reaching consensus. Every group did succeed in making an acceptable statement of a problem, even though several groups had to work into the coffee period to do so. Each group also succeeded in appointing two representatives to present its problem to the total staff.

DEVELOPING STATEMENTS OF THREE PROBLEMS

At 11 A.M., a general assembly was held. The ten representatives from the groups (two from each) sat in a circle in the center of our large meeting room. The rest of the staff surrounded this inner circle. Furthermore, an empty chair was placed directly behind each member of the inner circle. This empty chair could be used by any member of the representative's group who wished to communicate something to the representative concerning his discussion with the other nine representatives.

We gave to the ten representatives in the inner circle the task of describing to each other the problems that their respective groups had stated. Then they had to decide on the statements of three new problems that would encompass the five old problems to the greatest extent possible.

Representatives of all five groups displayed lists of some of the problems their groups had considered. These lists helped all the participants to understand the direction in which each group was pointing when it showed the one problem it finally brought to the assembly. The representatives also made use of comments and suggestions from members of their groups who would come to sit in the vacant chair behind them and whisper in their ear.

The trainers did not feel that the use of the empty chair behind the participants was an unqualified success. Sometimes the speaker was

seriously distracted by a member of his group whispering to him. At other times, a member of a group would have a difficult time getting the ear of his representative because the latter was too deeply involved in the discussion. At still other times, the visiting members of groups could not prevent themselves from joining in the discussion of the inner circle. In other instances people sitting in the visitors' chairs would get into satellite discussions with one another. Nevertheless, the device did provide a fairly orderly way of getting spontaneous messages from groups to their representatives during conversation among the representatives.*

By 2 P.M., the assembly, through its representatives, had arrived at a satisfactory statement of the following three problems:

1. Role clarification in the school
2. Greater use of the resources residing in the persons of the staff
3. Staff involvement: the work of dealing with matters important to the staff as a whole needed to be more evenly distributed over the entire staff

THE PROBLEM-SOLVING SEQUENCE

After the three basic problems had been stated, the staff was asked to form into three groups corresponding to the three problems. Participants were asked to choose the problem on which they would like to work and to join the corresponding group. However, we did limit the size of groups to twenty and thus we had to ask a few people to change groups.

Each group was instructed to work through a problem-solving practice involving the following five steps:

1. Statement of the problem
2. Diagnosis by means of a "force field"
3. Brainstorming to find alternative actions
4. Designing concrete plans of action
5. Trying out the plan through a simulated activity

We made it clear that we expected each group to work through all five phases of this problem-solving practice and that we expected the final tryout of a simulated activity to be as lifelike as possible—an actual step that would carry the entire staff at least some distance toward reducing the problem at hand.

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* In a later project, a team of trainers from CASEA used a variation on the idea of visitors' chairs. This was simply to leave a couple of empty chairs actually in the inner circle and let each visitor speak for himself. In one application the requirement was added that the visitor could not speak until he had expressed his perception of the consensual feeling in the group and had received verification of his perception in the form of the responses of the group to his statement.

The five phases of the problem-solving process should be explained in more detail.

First, although the three problems had been stated with some precision, we thought we would be following a sound theory of human communication if we elaborated the first phase to enable each individual to specify in his own mind what the problem meant to him and to be ready to express himself about this to the other members of his group. Consequently, we gave each individual a leaflet containing some questions and some blank spaces on which he could write his answers. In each group the trainers asked the individuals to go off by themselves, answer the questions in the leaflet, and then rejoin the group after the coffee period.

The leaflet contained the following questions accompanied by enough space for a written answer.

1. What is the problem?
2. Are there other people involved in some way? How do they relate to the problem?
3. Are there other factors that are relevant to understanding the problem?
4. If you had the power to change any aspect of the problem (but not to eliminate it), what aspect would you choose? You can pick only one aspect.
5. Thinking of the present state of the problem as a balance between opposing forces, try to list all the forces on *one* side of the issue. (In the present state of world affairs, daily events are the result of U.S. forces and U.S.S.R. forces: these are the two "sides.")
6. Now list all forces on the other side.
7. Go back to the previous page and think about how important each force seems to you. If it seems very important put a "5" next to it in the left-hand margin. If it seems not very important, put a "1" next to it in the left-hand margin. Do the same for "2," "3," or "4," depending on how the force being described appears to you.
8. How would you specifically change or manipulate any of the forces in order to solve the problem? Please refer to the forces by number.
9. Why does this course of action appear to be the best? Why did you choose to work on the particular forces you chose?
10. How hopeful are you that your method of dealing with the problem will be successful?
    _____ Extremely hopeful
    _____ Moderately hopeful
    _____ Not sure
    _____ Moderately unhopeful
    _____ Extremely unhopeful
11. Why do you feel this way about the outcome?

Next, members rejoined their groups and described their statements of the problem, their understandings of the people that would be involved in the problem, and their views of factors that would be helpful in the understanding of the problem. After some paraphrasing and discussion of the limits of the problem, the group was ready for diagnosis by the use of the force field. Social psychologists generally assume that even when a group exhibits a stable way of doing things, there are numerous forces at work within the group and its environment which, on the one hand, keep the group active in that way and, on the other hand, prevent the group from changing. There are not only forces that *restrain* the pattern from change, but also forces that would *facilitate* change on the part of the group. And the behavior pattern of the group would change were it not for the forces maintaining the present pattern and restraining the group from trying new patterns.

A further principle used in bringing about change in groups is that forces acting to maintain ways of doing things in a group are also forces to which the individuals have adapted themselves in other ways. Changing the balance of the forces in a group then not only requires changes on the part of the individuals to find a new way of interacting with each other but also requires adaptations on the part of the individuals concerning, for example, personal routines; their conceptions of their own capabilities or their own values; or even their bodily habits. As a result of this kind of consideration it is generally conceded that trying to bring about change by adding to the forces making for change is a technique that only complicates the total interlacing of forces, heightens the total tensions of the forces pulling against each other, and encounters relatively more side effects when the system begins to move. Reducing the restraining forces, on the other hand, reduces the total tensions involved, simplifies the network of interacting forces, and reduces the relative number of side effects that may be encountered.

Following this theory, the problem-solving sequence we used asks the participants to list both the forces that facilitate change toward the ideal state and those that restrain change; but the sequence pays special attention to restraining forces.

The listing of facilitating and restraining forces was conducted by asking members of each group to form subgroups of three persons each. The three persons in each subgroup pooled their listing of forces. However, the procedure was not identical in all three groups.

As examples we present below some of the restraining forces listed by the group on staff involvement. These are conditions, of one kind or

another, that members of the group felt might be acting to discourage some members of the staff from wanting to help with problems facing the faculty as a whole.

1. A heavy burden of assigned duties
2. Stereotypes about others
3. Fear of disapproval
4. Lack of skill in working in groups
5. Fear of being rejected
6. High commitment to subject matter
7. High commitment to welfare of self
8. Fear of losing control if emotionally overinvolved

After facilitating and restraining forces had been listed, the third stage of the problem-solving process called for thinking of ways that the restraining forces could be reduced. This stage, begun Thursday morning, used a brainstorming technique. The participants were asked to call off any techniques that popped into their heads about reducing the restraining forces, no matter how strange the ideas might have seemed at the moment.

Staff members were asked not to evaluate or comment on the feasibility of the suggestions at this point. The trainer recorded everything. After the brainstorming had slowed down, the participants went back and picked up methods they considered feasible.

As an example, here are a few of their suggestions on how to reduce forces restraining people from becoming involved in activities with other members of the faculty.

1. Wear sexier clothing.
2. Hold picnics.
3. Have a suggestion box in the hallway.
4. Rotate the lunch-hour duty.
5. Speak to people you don't like.
6. Schedule visits across subject and grade lines.
7. Rotate small and large groups in faculty meetings.
8. Eat lunch with a different group each day.
9. Develop skill in paraphrasing.
10. Record faculty meetings on video tape and play back later.
11. Employ more teaching aids.
12. Provide each teacher with a personal secretary.

In the group concerned with role clarity, the following are some ways of reducing restraining forces that were mentioned during the brainstorming phase.

1. A fifteen-minute period each morning for getting to know two other people better on a rotating basis.
2. Ride a jackass down the hall.

3. Hold listening exercises during staff meetings.
4. Wear crazy hats.
5. Blindfold the principal.
6. Have everyone at a staff meeting tell about one of his fears.
7. At a staff meeting, have others tell each person about his strengths.
8. Observe a different teacher's classroom each day and express something complimentary.
9. Make a mural with paint and bare feet.
10. Let the teachers decide on their assigned duties.
11. Exchange duties periodically.
12. Eliminate duties.
13. Teach someone else's subject for a day.
14. Eliminate power structure.
15. Eliminate counselors.
16. Make administrators more readily available to teachers.
17. Hold role playing (exchanging roles) at staff meetings.
18. Have a teach group explain their goals in a fishbowl.
19. Have a social-studies class do a study on prejudice within the faculty at Highland Park.
20. At the beginning of a meeting, take time for people to express their expectations about what should happen during the meeting.
21. Pick out the usual talkers and let them be observers at the staff meetings.
22. Try to find out why people are afraid of criticism.
23. Have a nonverbal exercise in trusting others; let a person stand in the center of a circle with the persons in the circle catching the person in the center whenever he leans too far.

The group on using staff resources produced these ideas for reducing restraining forces:

1. Identify resources existing within individuals through small-group discussion.
2. Conduct role playing on special problems.
3. Make an inventory of resources by means of a questionnaire.
4. Make a chart, through group discussion, of resources and ways of reaching them.
5. Organize students to seek out resources among faculty.
6. Interrupt class.

Next, the groups worked on their plans of action. The group on role clarity was ready first.

TRUST EXERCISE

The group on role clarity had agreed that one of the most important forces keeping the staff from achieving greater communication, understanding, and agreement was a problem of trust among the members. Lack of trust, they reasoned, caused people to keep information to themselves. It tempted people to keep their roles a little ambiguous so that

others would not know what expectations to bring to bear; it made people afraid of letting their worries be known concerning the role performance of others for fear they would be resented, laughed at, or rejected. Consequently, a first step toward eventually achieving improved role clarity would be to increase trust among faculty members. To demonstrate their belief that there were many ways in which the staff members could trust each other, the group on role clarity, with the help of two trainers, developed three nonverbal exercises in trust.

They called the first exercise the "trust circle" and demonstrated it with their own members. Six or more persons stood in a circle around a volunteer. The person in the middle was instructed to close his eyes and to keep his feet planted on one spot. However, he was to let himself lean if he were gently tipped by one of the people in the circle, confident that someone in the circle would catch him and push him back. During the demonstration, the person in the middle was tipped from one side of the circle to the other. The ring of people gradually widened their circle so that the person in the middle leaned farther toward the floor before being caught.

After this demonstration, the other members of the staff were urged to form into circles and perform this same exercise with anyone who wished to volunteer to be in the middle. The participants took eagerly to this exercise. Many persons who volunteered to be in the middle described the experience as deeply satisfying, exhilarating, or in some other way, happy.

In the next exercise, called "giving a gift," staff members were asked to form into groups of eight. One person volunteered to sit in the middle to receive gifts given nonverbally by others in the group. The gift giver was to hand something to the person in the middle that he considered important for the recipient to have. The exercise was aimed at reducing emotional distance and increasing the empathy and trust between staff members.

The third exercise led by the group on role clarity was called "leading a blind man." In this exercise, one person closed his eyes and another person took him by the arm and led him slowly about the room. Sometimes the person leading would lift the hand of the other and put it on some object or person so that he could explore tactually a part of his environment. Then the first person would lead the second person similarly. Participants remarked about the degree of trustfulness required by the person being led and the feeling of responsibility on the part of the person doing the leading.

It was the impression of the trainers that these exercises did indeed produce a significant increase in trustfulness and solidarity among the Highland Park staff.

EXERCISES ON PARTICIPATION

By 10 A.M. on Friday, the group on staff participation was ready to take the participants through the experience it had designed. This group reasoned that a significant restraining force keeping faculty members from joining more fully in joint activities with other members was shyness or fear of unpleasant consequences that might occur. They agreed that an exercise could help these people if it involved them in making greater contributions in some group task and if it gave them a pleasurable experience or, at least, a nonhurtful one.

The group on involvement divided the staff into three discussion groups. Each group was placed in a circle of its own. They were told they should conduct a discussion on either role clarity, staff involvement, or making use of staff resources. The discussion groups were also told that as time went on someone would come to their group and whisper to one of the members who would then push his chair back out of the circle. When that happened, the people in the circle were no longer allowed to talk to the person who had pushed himself out of the circle.

The groups began their discussions and as promised, someone from the group conducting the exercise would every now and then whisper in the ear of some person in a circle and that person would push himself out of the ring. Eventually. only three or four persons were left in each discussion group. The group on staff involvement then halted the exercise and explained what they had been doing.

This group had watched the discussions in each of the circles. When they felt confident that they had located a member of the circle who did more talking than the others, they whispered to him to move back out of the circle and to sit quietly. This process removed people from the discussion as soon as it was clear that they were doing more than their share of the talking. Thus, the burden of the conversation fell to people who did not typically talk in groups. In other words, the people who tended to be slow in participating in group discussion found themselves conversing in the group without anything very terrible happening to them. In fact, they found that others on the staff were pleased that they went on with the discussion after the others had been withdrawn. The low talkers did report that they had moments of difficulty in thinking of what they might say next. No group, however, found itself completely

at a loss. To finish this exercise, discussions were held in each group on the topic of feelings toward involvement among the staff.

THE CRISIS SIMULATION

The group that worked on using staff resources had found it difficult to arrive at a plan of action to which all could commit themselves. However, by working diligently through coffee breaks and lunch, the group succeeded in getting its exercise ready by 1 P.M. on Friday. The trainers had experienced anxiety over whether or not this group would succeed in its task. If the group had come to be looked on as a failure, this outcome might have been interpreted by some as evidence that it was hopeless to try to achieve certain kinds of coordination within the faculty, or that the effects of our training were unpredictable, or as having some other implication that would weaken the usefulness of the training during the ensuing months. However, group members did produce a workable plan.

The group divided the staff into several small groups. Each group was heterogeneous—each contained people having a variety of professional specialties. Next, each person was asked to play the role of someone having a different specialty than the one he actually had. Finally, each small group was asked to imagine itself to be the staff of a junior high school in which a crisis had occurred. The crisis was that the school was about to open the very next day and they had just discovered that no texts or other reading materials were available. The staff of the imaginary junior high school had the immediate problem of constructing a curriculum—of designing how to teach the next week—entirely by using one another's resources. The groups were then allowed to proceed with this task as best they could. Each group worked out a plan of sorts for carrying on the imaginary school during the next few weeks.

After each imaginary school had produced a plan, the entire staff was gathered into a single group where they discussed the meaning of the exercise with reference to Highland Park. With this exercise the practice of working through the five phases of the problem-solving sequence was brought to a close.

THE STRENGTH EXERCISE

On Saturday morning, after the staff had filled out two questionnaires, we divided them into five groups for the final exercise. We asked each participant to reflect for three or four minutes on what he felt to be his own strengths or special abilities and on what he felt to be the strengths of others sitting in his circle. We then asked them to tell one another in

their circles the strengths they perceived in themselves and in one another. After this had gone on for some time, we interrupted and said that if anyone wished to tell someone not in his own circle but some other place in the room about the strengths that he perceived in the other, this was a good time to do it. A number of persons did so. One teacher who had been at the school several years before the present principal arrived stood and spoke to the effect that when the new principal had come, she had been rather sure he was not going to be a person with whom she would enjoy working; but she had now changed her mind and was looking forward to her work in the school. Later we received corroborating and agreeing reports from a number of others.

THE POSTWORKSHOP REACTION QUESTIONNAIRE

Finally, everyone was given a sheet bearing four questions about the workshop:

1. How would you describe the general effects of the workshop on the Highland Park staff?
2. How would you describe the effects of this workshop on you?
3. In what ways do you feel the Highland Park staff can improve as a result of this workshop?
4. Are there any other comments (positive or negative) that you wish to make about this workshop?

In general, the answers to these questions indicated a feeling of profit and an expectation that attitudes and skills learned this week would be put to use during the months ahead.

4

Training During the School Year

THE summer workshop was only a beginning. We felt that stable and lasting organizational changes at Highland Park would only occur with substantial subsequent training. We viewed training during the school year as the primary vehicle for transferring summer learning experiences into revised communication and decision-making patterns within the structure of the daily school operation.

Diagnostic Interviews in November

Initial formal activities for following up the summer workshop were diagnostic interviews with teachers, administrators, counselors, cooks, and the custodial staff. CASEA interviewers spoke to groups of five or six until all staff members had had a chance to contribute answers. These interviews took place in early November so that the data derived might be used in shaping the first training event during the school year in December. The interview was opened as follows:

"We're holding this interview as part of the preparation for the training sessions on December 1 and 2. We would like you to discuss any issues or problems in Highland Park School that might profitably be worked on during those sessions.

"Let's brainstorm for the time being. Let's just let our minds wander; let's just say anything that comes into awareness that might constitute a problem at Highland Park. Remember, a problem can be defined as falling short of ideals. It doesn't necessarily have to be a very negative or painful situation, but it might be. Let's begin."

Interviewers were instructed to keep the discussion moving and to use some of these probes: Can you be more specific? Are there other people involved in some way? I wonder if anyone else wants to add anything? Have we covered most of the significant problems now?

CASEA's interviewers kept a list of the issues discussed and attempted to sum up each interview session by briefly reviewing the main points. Finally, interviewers asked, "Which problems do you think are the most important and consequently should receive top priority in our planning for the December 1 and 2 training session?"

The interviews generated much useful data about what the organization members viewed as problems. Their statements overlapped considerably, but after classifying them we had seventeen issues which summarized reasonably well the longer list. These seventeen problem areas in turn fell into five major categories: communication, role overload, role clarity, meeting effectiveness, and some miscellaneous issues.

COMMUNICATION

1. The communication network linking principal with faculty through area coordinators wasn't always effective. The problem was exacerbated by the many other activities of the area coordinators and the principal. The need appeared great for area coordinators to identify with the role of representative and to increase two-way communication between the principal's advisory group and the faculty.
2. Communicative breakdowns and confused role expectations seemed to exist between some faculty members and counselors. Perhaps this also hindered the effectiveness of the Faculty Guidance Committee.
3. Communication difficulties that sometimes occurred within area groups created such problems as a lack of clarity with regard to goals, little continuity between grade levels, and little influence in choosing texts.
4. Memoranda were not serving as effective media for communication in the school. Perhaps the design of the memos could be communi-

cative; the art department was encouraged to work on this issue.

5. Communication networks in the school excluded many. Ways would have to be sought to increase the dispersion of contacts and clarity of communication among staff members.

ROLE OVERLOAD

1. The vice-principal was viewed as having too many demands on his time. An analysis of tasks was suggested to see if some of his functions could be transferred to others. It was suggested that the Principal's Advisory Committee discuss this.
2. The directors of guidance also appeared to be overloaded. Perhaps the functions of the Faculty Guidance Committee could be made clearer and perhaps it should be asked to absorb some of the demands made on the counseling department.
3. Some staff members were carrying out too many functions. For instance, many activities burdened those persons who were simultaneously members of the Teach Group and an area group. One issue for discussion was the possibility that teach-group members, who were also area coordinators, might have co-coordinators to perform some of their functions in the area groups.

CLARITY OF ROLES

1. The counselors' role with regard to discipline was unclear. Some staff members felt that the counselors were disciplinarians. The counselors' role on hall duty during the lunch period suggested that they were disciplinarians.
2. Another problem concerned staff members responsible for school equipment and regulations, and the ways faculty might handle teachers who did not assume enough responsibility.

EFFECTIVENESS OF MEETINGS

1. The principal's advisory group was failing to fulfill its role in linking staff and administration. It was suggested that the group discuss its own processes and seek better ways of implementing two-way communication within the school.
2. The Faculty Guidance Committee needed clearer goals and more effective procedures. Since there was a need for better communication between faculty and counselors, this was one set of goals for the group to focus on.

3. Some area groups needed improved internal group processes. Often they were not working so effectively as they might. Two-way communication was rarely heard in some area groups.
4. The Teach Group, though continuously improving its own group processes, nevertheless wished to work further on its effectiveness. It had to face the issue of role overload among its members.

SPECIAL ISSUES

1. A problem the cooks faced was that many children used their lunch money to purchase ice cream instead of the meal prepared for them. Discussion and problem solving seemed necessary here.
2. Discipline in the halls continued to be an area around which little clarity existed. The custodians were confused about their roles as disciplinarians.
3. Grading was another issue for problem solving. Some asked, "Is there need for a common philosophy on grading standards?"

After having categorized and summarized the issues presented to us by the Highland Park faculty, we made another visit to ask them to check our work. We urged the staff to add other issues that we might have missed in the summary. None was added. We also discussed briefly with them the design for the training session on December 1 and 2.

December Session with Entire Staff

We divided the December session into three half-days and developed a list of goals for each. Goals chosen as most crucial for the first half-day were (1) to help the area groups become more effective in viewing their own group processes and in solving problems; (2) to help the counseling and guidance group search for better ways of using the Faculty Guidance Committee to solve some of their problems; and (3) to help the cooks, custodians, and two top administrators collaborate on solving problems of service personnel. The training design assumed that the area groups were the basic "building blocks" in the school and that a lack of adequate representation by area coordinators was one of the key organizational weaknesses of the school. At the first session the area groups met in three separate clusters: math and physical education, science and applied arts, and social studies and language arts. Prior to this session, each area group had been asked to come with at least one or two real problems they wished to solve. In addition to the area groups, we put together two more

clusters. One contained counselors and the other included the two top administrators, their secretary, the head custodian, head cook, and the librarian.

In each area cluster, two groups sat in a fishbowl arrangement; the group in the inside worked through a problem-solving sequence while those in the outside group acted as observers. Trainers facilitated the problem-solving process and guided feedback to the problem solvers while sitting with the outside group.

Since their clusters were too small the counselors did not use the fishbowl arrangement, nor did the cluster containing administrators, librarian, cook, secretary, and custodian. In these two clusters the trainers helped both to maintain the problem-solving sequence and to observe interpersonal processes.

The problem-solving sequence introduced by the trainers was similar to the one employed during the summer workshop. Our plan was to help Highland Park staff members apply this process to real and timely issues facing them. The problem-solving process required five steps: (1) problem identification, (2) problem analysis, (3) problem diagnosis, (4) planning for action, and (5) trying out the action.

LANGUAGE ARTS AND SOCIAL STUDIES

At the beginning of the problem-solving session the language-arts teachers moved into the center, with the social-studies group forming a ring around them. Their discussion focused on the role of the area coordinator who asked for advice from the group about how she ought to perform her role. One teacher suggested that a lack of interpersonal empathy was a problem for the group. However, she appeared to be saying that little understanding existed in the group for the special problems of the foreign-language teachers. It was decided then that the three foreign-language teachers should go into a special group of their own to discuss their similar unique problems for an hour.

At the end of the language-arts session, the coordinator was lauded for her performance. The group's reactions were sincere, indicating that the most significant problems existed among certain individuals in the group and not between the area coordinator and the members.

As the language-arts group changed positions with the social-studies group, three individuals left the session to go home. After the social-studies group assumed the inside position, one member pointed out that key individuals centrally involved in the main problem of the group had just left. A major problem, as several viewed it, existed between the edu-

cational "traditionalists" and the "modernists." It seemed to resolve around value and personality differences. Two members of the traditionalist group still remained. A teacher of social studies, one of the modernists, pushed the issue by confronting another teacher, one of the traditionalists. Other comments indicated that the area coordinator, a modernist, often threatened the traditionalists. The group then gave the coordinator additional feedback about the ways he "came across" to them—that is, the ways they perceived his behavior and how he made the others feel.

The meeting ended with the two area coordinators asking about their roles as coordinators. Several members pushed hard for defining the role as an area "representative" so that communication would be between teachers and administrators. Several others questioned this idea, but gradually they altered their views and seemed to accord the representational aspects of the coordinator role a higher value as the discussion continued.

COUNSELORS

This group decided to focus on communication between teachers and counselors. They described their goals to be open and effective committee meetings, recognition from the teachers for the counselors' competence, and recognition by the counselors for the teachers' competence. The only restraining force mentioned at first was the absence of a time for the teachers and counselors to meet. Later, however, the question of attitudes toward discipline was raised as an important restraining force.

Toward the end of the meeting, participants claimed that solutions to the discipline problem were being bottle-necked at the school system's central office because of its lack of policy concerning the role of the counselor.

SCIENCE AND APPLIED ARTS

The applied-arts group went into the center and started by denying the existence of any group problems, offering a number of individual problems instead. Some were: (1) unsatisfactory scheduling of classes, (2) lack of status in the school's curriculum (students are not required to take applied arts), (3) administration's refusal to approve a joint project between band and home economics which involved the purchase of uniforms, (4) administration's policy concerning the sequence in which students would take a given course, and (5) inconsistent grading practices.

As the discussion progressed and the members of the science group

reported their observations, a feeling was expressed that more communication was needed within the applied-arts group. The following restraining forces were listed as barriers to more effective communication within the group: (1) divergent and sometimes conflicting interests existed, (2) complex teaching schedules prevented the group from meeting, (3) each teacher was "married" to his own subject, and (4) some considered area group meetings as unimportant.

One possible solution discussed was to have two area meetings per month and to split time evenly between information giving and problem solving. The group also recommended that one meeting be scheduled in the morning and one in the afternoon so that everyone would be able to attend.

The science group moved into the center next and quickly built on the first group's discussion by identifying their own problem as a need for more effective communication within their area. They enumerated several restraining forces and soon began brainstorming steps for improvement. They decided to begin their meetings earlier than usual before school and to provide for an evening meeting—one that could be called by anyone in the group—devoted to special problems. The group also decided that their area coordinator should distribute an agenda prior to meetings to expedite communication there.

The applied-arts group, in giving feedback to the science group about their group processes, added that they had gained a number of insights from watching the science group. Such insights included the way in which the discussion flowed, the idea of a circulating agenda and packet of materials, and the role of the area coordinator in facilitating the flow of the discussion. The trainers felt that these two groups had used the fishbowl structure effectively and had learned much from each other.

SATURDAY MORNING SESSION

On Saturday we met at a nearby college. Our training goals for the morning's session were: (1) to help the Principal's Advisory Committee to be viewed as a body representing the concerns of the staff, (2) to help it to become more effective, and (3) to help the staff to see how the area coordinators might be able to facilitate communication up and down in the school organization.

The design used to implement these goals called for a simulated meeting of the Principal's Advisory Committee in the presence of the faculty. The two top administrators, the director of guidance, and six area coordinators made up the committee. Two CASEA trainers sat in on the meeting as group facilitators. The school staff, along with the other train-

ers, sat on the outside in a semicircle so that they could easily observe the meetings.

Three observing groups were formed from the staff not in the Principal's Advisory Committee. One observation group was split—one half was given the job of observing for task-centered processes and the other half was directed to observe interpersonal processes. The second group was asked to describe the forces impinging on the Principal's Advisory Committee that facilitated their having an effective group session or that restrained them from doing so. Finally, observers drawn from every area group were trained to watch for the efficacy with which coordinators represented the views of their area-group colleagues.

The session commenced with each observing group going off for ten minutes with its trainers to get instructions. The Principal's Advisory Committee arranged itself into a semicircle and started its meeting just before the observers returned. Two empty chairs were left in this semicircle so that any audience member might enter to ask a question or make a contribution. A CASEA trainer told the committee that the purpose of the meeting was to discuss issues that may have come out of the Friday afternoon discussions.

The committee started by brainstorming an agenda. On a board were written: honor roll, open house, elective vs. required subjects, the role of the counselor, how area group meetings are run, the role of the Principal's Advisory Committee, problems with ice-cream sales, the duties of counselors and others especially with regard to student conduct in the halls, more planning time for teachers, the uses of the fishbowl method in other settings, rules concerning discipline, and released time for visits to other buildings. The committee agreed that four items had priority: (1) honor roll, (2) the counselor role, (3) open-house arrangements, and (4) the role of the Principal's Advisory Committee. They decided to start with what they considered an easy one—the honor roll.

The trainers believed that the committee produced their agenda in a straightforward manner. Moreover, committee members handled the topic of the honor roll effectively by asking the area coordinators to discuss the issues thoroughly in their respective groups prior to the next full staff meeting. During the discussion, trainers observed adequate clarification of meaning from one person to another and that the feelings of the entire staff were taken into consideration.

The committee turned next to a discussion of the role of the counselors. However, a few committee members pointed out that they were simultaneously trying to clarify the role of the Principal's Advisory Commit-

tee. The committee (as well as several staff members who entered the semicircle by sitting in an empty chair) was disposed to discuss relations between counselors and teachers specifically, with a willingness to confront conflict directly.

The use made of the two empty chairs during the meeting was often effective. One member who entered the group early to challenge the agenda priorities was influential in doing so: the committee quickly finished talking about the honor roll and moved into a discussion of the counselor's role.

SATURDAY AFTERNOON SESSION

The major goal of the afternoon was to allow time for the advisory committee to consolidate recommendations and observations—especially those that concerned the problem of two-way flow of communication within the school.

First, the observing group that had prepared a force-field analysis of the advisory group's effectiveness moved into the center of the fishbowl arrangement to give feedback to the Principal's Advisory Committee about the morning meeting. Key comments mentioned the deficiencies in the committee's group processes. It was also noted that the principal was the one group member to organize the discussion and to attempt to summarize it. Other members were seen only as contributors of ideas and information. In other words, the group was encouraging the principal to be the traditional leader. Observers believed that the committee would be more effective if others occasionally performed leadership functions. These views were corroborated by the first observation group.

Next, the groups that had done some problem-solving on Friday afternoon went back into session to discuss their ideas of the role of area coordinator and their expectations for the Principal's Advisory Committee. They also explored the kinds of functions they hoped the coordinators would perform in the committee and in their own area groups.

Several weeks after the end of the December sessions, the principal was interviewed about their effects. He saw four things emerge as a result of the sessions: (1) The mathematics area group requested a change in their area coordinator because he had many extra duties which often took him out of the building. The principal decided to appoint a new assistant area coordinator after consultation with the advisory committee. (2) The staff resolved the honor-roll problem; the principal felt the area chairmen had done excellent work in having the issues discussed in their group meetings prior to the general faculty meetings. (3) The Faculty Guidance Committee decided to meet to work out a solution for the role

of the counselor. (4) The Principal's Advisory Committee requested more training and suggested that a CASEA trainer join them for a half day during January.

January Session with Advisory Committee

The focus of the January session was on group and organizational decision-making. The area groups also met to make some decisions about curriculum. The area coordinators wanted to discuss decision making with their groups and then gather as the advisory committee a few days later to check with one another on how the area-group meetings had done.

The CASEA trainer presented a decision-making chart which originated with John Wallen of the Northwest Regional Educational Laboratory. The chart is a matrix in which the columns represent different roles or status levels in an organization such as principal, assistant principal, counselors, teachers, service personnel, and students. The rows of the matrix indicate points at which decisions need to be made. In developing a curriculum, for instance, some decision points might be determining the goals, specifying the procedures, ordering materials, storing materials, and sequencing the procedures.

The group was then presented with five possible kinds of influence that any given role unit would have in relation to each decision point. Group members were to complete the matrix by discussing the appropriate kinds of influence for each role at each decision point. The Principal's Advisory Committee struggled through the construction of a matrix but were unable to finish it in the allotted time. Toward the end of the session, a heated discussion broke out between a teacher and the principal. The teacher said that in virtually every decision, except for the most trivial ones, the principal required that his approval be obtained. The principal denied the allegation and pointed out that the approval function often lay in the central office of the school system. He saw himself as a message carrier from the central office to his staff.

The conversation soon changed from decision making to the interpersonal gap between the principal and the teacher. The two continued talking for about twenty minutes after the meeting, and both felt somewhat better by then. It is doubtful that this confrontation would have occurred without the decision-making exercise or the presence of a trainer. The small success of the decision-making discussion and the subsequent confrontation led the trainer to suggest that the training session in February include time for the Principal's Advisory Committee to reflect on its own interpersonal relations.

February Session with Entire Staff

The main objective of the February session was to evaluate the distance the staff had traveled since the summer workshop in August and to emphasize the needs for improvement that still existed. Three groups were formed to carry out discussions about using resources, role clarity, and staff participation. The teachers were asked to join colleagues with whom they shared a free period during the school day. This was done to facilitate continued discussions about staff relations after the close of this session.

Each of the groups started by dividing into units of three or four persons. These subgroups discussed the positive and negative *outcomes* of the issue being discussed (using resources, role clarity, or staff participation). For example, the group discussing staff participation raised the question, "In what ways has staff participation improved and where has it failed to improve since August?" They then were asked to give some examples of improvements in staff participation this year, and, conversely, to give examples of situations in which participation had not improved. They were instructed not to list an achievement unless it was new or clearly greater than last year.

These ideas were collected and summarized in written form. Later the small groups rejoined one another to discuss their agreements or disagreements about each perception.

The groups then divided into clusters of teachers who shared their free period at the same time to imagine creative, concrete ways for solving or eliminating the negative outcomes or unfulfilled goals. These clusters thought in terms of what teachers could be doing to realize a particular goal or in what ways the school day could be changed. For example, the group discussing staff participation was asked how the school might be changed to "increase participation where it now does not occur."

The total staff spent approximately three hours meeting in small groups before a general session was called. Each group handed in its proposed solutions and was told that it would receive feedback about them from the CASEA staff.

Finally, the CASEA staff suggested that more work on problem solving take place over the next few months in the free-period clusters.

STAFF PARTICIPATION

The group on staff participation was composed of twenty-one members, divided into five subgroups. It reached agreement quickly on sev-

eral positive trends and worked with a high spirit of collaboration and involvement. Only one member seemed to feel alien to the task and he was one of the staff members who had missed much of the earlier training.

Positive outcomes in relation to staff participation about which there were general agreement included:

1. Some staff-initiated faculty meetings occurred in contrast to the administration always calling such meetings.
2. Conferences among staff, students, and parents are occurring more often.
3. Staff members feel freer this year to express their true feelings.
4. There are feelings of greater "togetherness" throughout the faculty.
5. Improved relationships have occurred between some counselors and teachers.
6. Staff members place greater emphasis on checking for communication clarity.
7. Greater general feelings of well-being and security exist on the staff because of overlapping friendship clusters.
8. The faculty feels a greater spirit of cooperation.
9. The staff exchanges more ideas and materials (using one another's resources better).
10. It is easier to talk to one another, thus showing a higher security on the faculty.
11. Teachers are more influential than last year in relation to the administration.
12. There is a better general climate and participation among the students.
13. Those faculty members who did not formerly speak at meetings participate more.
14. The majority of the staff communicates better.
15. They share more materials.
16. They show a greater respect for one another.
17. The quality of written materials (memoranda) has improved (except area coordinators are overwhelmed).
18. There is better advance warning on meetings and better agenda-setting.

Each subgroup also tried to generate tentative solutions for unfulfilled goals. Here is a summary:

Problem: Fewer faculty get-togethers outside school hours than last year, indicating lower social esprit de corps. Proposed solution: occasionally take school time for social functions by allowing students to go home early on Fridays.

Problem: Insufficient time to share problems as a total group. Proposed solutions: (a) more school time to share ideas, (b) more faculty meetings to share ideas, (c) counselors take over classroom to work with students while teachers confer together, and (d) different mechanisms to initiate meeting; for examples, (1) a faculty president, (2) area or departmental initiation, and (3) the principal.

Problem: Some deterioration in some counselor-teacher relationships. Proposed solutions: (a) more teacher-counselor conference time concerning (1) interpersonal relations and (2) student-teacher-counselor relations; (b) perhaps Friday afternoons could be used for this.

Problem: (1) Low empathy between staff members, (2) lack of total staff participation; many of the same people as last year are participating, (3) channels of communication between administration and faculty could be clarified and used more, and (4) lack of consideration for other teachers in letting classes out early. Proposed solutions: (a) set up a structure of permanent small groups including *all* staff members, (b) develop reading or discussion groups, and (c) arrange for professional films and book reviews for area meetings.

Problem: (1) Lack of teacher cooperation in proper use of the library and materials, (2) lack of teacher cooperation in maintaining school rules such as lateness to class, early dismissal, gum chewing, etc., and (3) no feedback from the counseling office on such issues as pupils wanting to change classes. Proposed solutions: (a) teachers sign up for the library sooner, (b) teachers have a refresher on how to check out books, (c) discuss library passes with study-hall teachers or call a general meeting on uses of the library, (d) observe time for class dismissal, or ask administration to apply negative sanctions to those who do not observe time, and (e) more feedback on group counseling sessions to teachers.

Problem: (1) Duty schedules need changing for those who have

extra duty assignments, (2) redundant uses of public address system, (3) not enough staff influence in administrative developments, (4) study halls are point of dissatisfaction, (5) scheduling is confused, and (6) too much overload in vice-principal's role. Proposed solutions: (a) teachers be asked to evaluate course content and scheduling, and (b) teachers help with scheduling in some way so that next year's schedules are determined by the end of this year.

Problem: (1) More cooperative behavior between teachers and counselors needed on discipline, (2) lack of interest in professional organizations, (3) personal and interpersonal tensions, (4) lack of interest in interpersonal-process meetings, and (5) teachers' social life has been lessened. Proposed solutions: (a) the lack of interest in professional organizations should be summarized and presented at a faculty meeting for problem solving, and (b) to reduce tensions between counselors and teachers, have counselors give more feedback to teachers without letting students know that such feedback has been given. Keep feedback confidential between student and counselor *and* counselor and teacher.

STAFF RESOURCES

This group was made up of sixteen members. It worked effectively, producing useful information for facilitating further staff development and problem solving. Three members noted right after the session that they saw much more accomplishment in this one than in other training sessions.

Twelve positive accomplishments were agreed on by this group:

1. Team teaching in the health program.
2. Fourth-period activity programs.
3. The collaboration of two teachers in a 7th-grade block.
4. Generally more helpful teacher-counselor relations.
5. Sharing materials as well as ideas in special education, reading and speech, French and English, and among several science teachers.
6. More common planning among teachers within subject areas.
7. Better use of resource man in mathematics.
8. Increase in flexibility of teachers in accepting difficult students to help each other.
9. Use of teachers' secondary resources in substituting. For ex-

ample, teacher A may be sick and the available substitute may be skilled in a different field. In such a case it is becoming useful to find a teacher B who has A's skills but who would ordinarily teach that day in the substitute's field. The substitute then takes B's class and B takes A's.

10. Use by physical education department of outside experts to help all students; last year they were brought in to help only a portion of the students.
11. Use by a science teacher of an Indian unit from social studies.
12. Combined classes in mathematics; social studies and literature combine classes for special events.

Some outcomes generally agreed *not* to have been achieved were:

1. Planning extracurricular activities in the 7th grade on the basis of talents, wishes, and resources of teachers.
2. Better use of counselors; continued use of counselors as "police" in the hallways undermines their effectiveness as counselors.
3. Improved use of materials; much material and equipment in various rooms are still not known to be available to other teachers.
4. Making knowledge of staff resources available; no inventory of the personal resources of the staff exists.
5. Cooperation in controlling students; teachers still do not cooperate equally in surveillance of movement of students in hallways between classes.
6. Coordination among certain subgroups; coordination within one group of math-science block teachers has declined, possibly because of scheduling difficulties.

After producing these lists of goal achievements and nonachievements for the year, group members formed into two new groups to think of ways things not achieved might yet be achieved. Notes from the two groups are as follows:

Problem: Teachers still do not cooperate equally in surveillance of movement of students in hallways between classes. Proposed solutions: (a) bells at certain times (morning and noon), and (b) consistency in following through on adopted policies such as hall conduct and gum chewing.

Problem: We do not have an inventory of the personal resources of the staff. Proposed solution: Circulate a preference sheet with

those courses probably being offered and spaces provided for teachers to list their areas of special interest or special preparation, such as: art, hunter safety, caligraphy, photography, etc.

Problem: We do not have an inventory of the general resources of the staff. Proposed solution: inventory teacher resource profile by questionnaire such as: recent travel, interests (subject area), hobbies, and additional resources of people outside of school. Immediate next step: Devise topics to be included in the questionnaire; start rough draft.

Problem: Continuing to use counselors as "police" in the hallways undermines their effectiveness as counselors. Proposed solutions: (a) find a place for students to go during lunch period and plan more activity, such as a sock hop; (b) reemphasize teachers' responsibility for hall duty between classes; and (3) remove counselors from hall duty and put on counseling duty in small classrooms during lunch period. Immediate next step: Have the administration explain what the duty situation actually is.

ROLE CLARITY

This group, composed of fourteen staff members, had much difficulty in progressing through the design. They focused solely on unfulfilled goals or negative instances of low role clarity. Their discussion seemed to require so much energy that no time was given to seeking solutions. Nevertheless, the group members were open in their expression of problems and listed seven issues which, from their point of view, continue to bother the staff:

1. Lack of time to fulfill obligations works against role clarity for all staff members.
2. The many duties and areas of responsibility of the vice-principal are not clear, especially those concerning disciplinary actions.
3. The role of the principal, in general, is not clear.
4. Teachers often must assume roles that have not been formally assigned to them. Frequently problems are encountered in these assumed roles because of inadequate training or incompetency.
5. Are counselors to be disciplinarians or friends of the student? Teachers see counselors as disciplinarians; students do not.
6. Area chairmen may be nothing more than extensions of the principal rather than representative voices of their areas. They have many duties with little or no reward for their output.

7. Staff members are not fully aware of their responsibilities to others within the school. There seems to be a general lack of respect and consideration among faculty members.

The CASEA staff mimeographed all of these problem statements and proposed solutions and mailed them back to the appropriate groups. The letters also urged the groups to get together occasionally during their common free periods for continued work on these problems.

SUMMARY OF REPORTS

The great variety of reports given by Highland Park staff members on goal achievement makes it difficult to summarize them. Moreover, for some of them, there was considerable disagreement. For instance, some staff members thought that considerable distance had been traveled toward closing the gap between counselors and teachers. Others saw it quite differently, indicating that a significant breach still existed. With this and other issues, most parties perceiving the situation may be accurate at least from their different perspectives. Some staff members were able to recognize progress, perhaps because they did not expect great changes. Their disagreeing colleagues probably expected major changes to occur toward a closer relationship between counselors and teachers; when they did not see much change taking place they emphasized the negative. This process undoubtedly affected many of the discussions raised by staff members.

And so, we tried to isolate those reports that specified objective and delimitable events for which there was no disagreement. The following positive actions can be summarized:

1. Staff members did initiate faculty meetings several times and this represented a major departure from the way things were done traditionally.
2. There were more staff-student-parent conferences than in the past.
3. Two teachers were actively collaborating as a team in a 7th-grade block. These teachers were not members of the Teach Group, which had been the only team-teaching unit in the school.
4. Team teaching started in the health classes.

On the negative side, two points can be described:

1. There were fewer faculty parties and informal get-togethers this year than last. Although we have little information to go

on, this might indicate greater security on the staff and less need for superficial get-togethers.

2. No inventory of resources on the staff had been drawn up.

There were also some subjective, uncountable impressions of things about which most staff members agreed. Some positive ones were:

1. The staff members felt freer this year compared to last to express their true feelings to one another.
2. There seemed to be a better exchange of one another's resources.
2. Resource people such as the man in mathematics were being used this year.
4. Generally, persons felt that there were greater feelings of cohesiveness on the staff.

Some negative points included:

1. There still was insufficient time to share and to solve problems.
2. Aspects of some roles, especially those of principal, vice-principal, and counselor, remained unclear.
3. Some teachers still were not carrying out surveillance of the halls according to the expectations of others.

February Session with Advisory Committee

The Principal's Advisory Committee had earlier requested that CASEA trainers spend a full day helping them to discuss their own interpersonal relations. We arranged such a session in February.

A few group members suggested that they needed to become better informed about decision-making procedures. The group decided to make explicit the functions they saw themselves performing when making a decision in the group. The label "advisory committee" caused some to believe that the principal was supposed to make every decision after having consulted group members. The principal said, however, that he hoped the group would work together to make more decisions.

Group members felt that they still needed to improve their performance as communication link between the advisory committee and the teachers in their areas. So, the committee decided to try another open meeting and to allow for teachers' comments.

Several members discussed how difficult it was for the advisory committee to discuss openly their own interpersonal relations. Some attempts

were made to give feedback to others and generally the information was received as helpful and beneficial to the group.

The committee also decided that too much of their time was spent in information exchange and not enough in problem solving. They decided to have a few additional breakfast meetings in which all of the time would be reserved for problem solving and process analysis.

After the advisory committee's interpersonal self-analysis, the interventions planned for this project terminated. It remained to collect post-test data in May and to assess the effects of these training sessions.

5

Outcomes: Organizational Changes

A theory about organizational processes in school staffs was presented in chapter 2. We discussed some of the internal difficulties a faculty might encounter and some steps we believed they could use to overcome them. We described our approach to training and listed some specific hypotheses concerning certain outcomes. This chapter examines some outcomes we obtained and discusses the extent to which the observed results were of the sort we predicted.

Hypotheses

For convenience, the hypotheses we stated originally are repeated. Hereafter, we shall refer to them by number.

1. The Highland Park School will establish a continuing series of activities for improving communication.
2. Participation in group meetings will increase and attempts to influence others will become more widespread among the staff.

3. Frequency of discussion among the staff about interpersonal relations will increase.
4. The staff will invent new forms of organization within their school, or at least borrow and use some forms from our training.
5. The staff will develop more productive working relationships among formal role levels.
6. When a staff member proposes a new way of doing something, he will more frequently test his idea with a formally established subgroup before the idea is taken to the administration.
7. Some of the new forms and methods will affect classroom instruction.
8. Finally, some of the new forms and methods will occur spontaneously.

Concrete Instances of Organizational Change

What kinds of outcomes did we intend to leave after the training at Highland Park? We wanted to leave behind some new ways of actually doing things in the work-a-day school. We hoped for new ways of solving problems and of using staff resources to handle problems. At the same time, we hoped that the new social forms and the efforts to make the new social structures work would originate with the staff, and not consist only of those forms handed down or recommended by us. In essence, we wanted them to be able to design and install their own organizational innovations.

We hoped that new patterns of organizational behavior would be developed that would be obvious to us within a year. Examples that would fit our aspirations might be the formation of new functions for existing positions, new committees or changes in old committees, or new contacts with sources of information outside the organization. Obviously, when the members of a school staff participate in events of this sort, they are not merely expressing beliefs or making promises; they are taking actions that may have significant effects on their careers and personal lives. In brief, they are carrying on their real work in new ways.

A self-renewing school is one in which the members think of the organization as alterable in allocation of authority, distributions of internal functions, systematization of work sequences, schedules, and community relations. Such a school is capable of gathering valid diagnostic information about itself, of distributing that information to its members, and of using the information to solve problems in a manner that deals realistically with the objective facts and the goals of the organization, and

achieves the necessary commitment to carry out the solution. This kind of capacity calls for new forms of communication and problem solving among the faculty.

We did not design the training to *directly* produce the sort of organizational inventiveness we have called self-renewal. Our training was confined almost entirely to the skills and concepts themselves and to their use in alleviating existing problems.

Nevertheless, several events occurred during the 1967-68 school year that did display the self-renewing character. During the interviews early in the school year, one of the first effects of the summer workshop was noted. Application of the technology of group processes to classroom teaching, a matter that had received only perfunctory mention and no practice whatsoever during the summer workshop, had been applied several times. Other events occurred that had visible effects on the way things were being done at Highland Park.

Because some of these new organizational forms and processes were dramatic, and because they are close to the self-renewal outcomes we sought, this chapter will show how these concrete events can be considered critical evidence for our hypotheses.

IMPROVING COMMUNICATION

The first hypothesis predicted that a continuing series of activities for improving communication would arise within the staff. Although we cannot rehearse every small event that might have improved communicative efficiency during the year, we believe that these organizational events were especially significant.

A new role for area coordinators. The first important innovation to occur, although designed with some aid from the CASEA trainers, was initiated by the school staff. Previously, area coordinators had been designated as members of an advisory committee that met with the principal. One function of the committee was to serve as a "sounding board" for the principal but, of course, he came to look upon it also as a source of information.

Although the area coordinators perceived themselves as being information sources for the principal, they did not collect information in any systematic way so as to maximize their effectiveness. Consequently, the principal complained that much of the information they brought him was limited or biased. The area coordinators made this same complaint about one another; further, the teachers complained that the little information flowing from the administration to them was frequently biased.

As this problem was discussed in committee meetings, at the summer

workshop and later in the fall, teachers, area coordinators, and administrators came to feel that norms for the role of coordinator should be revised to improve the flow of information. Upon request, the CASEA staff designed some training events for practicing the actions called for by the new norms.

One such training event, carried out in December, was described in chapter 4. The members of the advisory committee made it clear at that meeting that they had accepted the new roles. Their concern then was to develop skills to make the new functions effective. Efforts to master the new skills continued. Following the December event, the committee members requested still more training and a session was held in January and February (see chapter 4).

Open committee meetings. One technique used by the trainers was an open meeting. On December 2 the Principal's Advisory Committee held a meeting in the presence of the faculty. The latter sat in a semicircle so that they could easily observe the enclosed committee. Two empty chairs were left among the committee to be used by members of the audience who might want to ask a question or comment on the proceedings.

After the intervention in February, advisory committee members felt they still needed to improve their skills as links between the administration and the teachers. They decided to give themselves further training in this role by holding another open meeting.

The 1968 summer workshop. If the training was effective and the faculty undertook new forms of collaboration, one might expect that some of them would think that with the coming of the new year numerous newcomers joining the staff might not fit directly into the new organizational patterns. Even if the newcomers had had training in communicative processes elsewhere, they would not have undergone training as participants in the network of roles at Highland Park. If a significant number of the "old" faculty had achieved a conception of organizational training that included training the entire group *as a system* rather than training individuals, one might predict that there would be some proposals among the faculty to renew the training *as a group.*

The faculty did initiate a workshop in organizational training. This second workshop, held for two days in August, was discussed at length in meetings of area groups and the general faculty before the decision was made to hold it. The Principal's Advisory Committee decided that the workshop should have two goals: (1) Socialize the new members of the staff into the role expectations of the old, and (2) enable teachers to learn how to carry skills of group processes into their teaching.

We did not urge the staff to institute another workshop after the February training, although we discussed the possibilities with them when they initiated discussions about the potentialities of their faculty for 1968-69. Furthermore, we offered the staff no inducements to conduct a workshop in the summer of 1968. In particular, we provided no financial support; we provided aid only to the extent of giving the principal names of recommended trainers for the workshop.

In considering the innovations produced by Highland Park staff in organizational communication, the question arises whether similar kinds of initiated activities are not also typical of other junior high schools. In chapter 6 evidence will show that some of the kinds of activities we describe are less typical in some other suburban junior high schools. As to the activities described above, we can at least say they were indeed new to Highland Park.

PARTICIPATION AND INITIATIVE

The second hypothesis that participation in group meetings and initiation of influence attempts would become more widespread seems supported by the Principal's Advisory Committee decision to hold a special meeting for the purpose of increasing the participation of the faculty in its deliberations. An event that occurred several weeks after the December intervention also seems to support the hypothesis. The mathematics area group had requested that a new coordinator be appointed since their present coordinator was shouldering many extra duties that often took him out of the building. This request was an invitation from the mathematics teachers *as a group* rather than a series of individual complaints or a move initiated by the administration. Subsequently, the principal appointed a new coordinator.

CONCERN WITH INTERPERSONAL RELATIONS

Hypothesis 3 predicted that frequency of discussion among staff about interpersonal relations would increase. One bit of direct evidence of increased concern for interpersonal relations is the origination of the 1968 summer workshop. The principal's request that the school district pay part of his expenses to participate as an intern at laboratory training for educators at Cedar City, Utah, is additional evidence. In June, 1968, he participated in a three-day advanced workshop on developing leadership skills as preparation for attending the August laboratory sessions. Another similar bit of evidence is that six Highland Park teachers announced their intention to attend, at their own expense, a workshop in group dynamics at the University of Oregon in the summer of 1968.

NEW FORMS OF ORGANIZATION

The fourth hypothesis predicted that staff members would invent new forms of organization within the school or would at least borrow some forms from the training events. One new form that appeared was the role as representative for area coordinators that we described earlier. Another was the open meetings mentioned above.

The fishbowl technique introduced to the Highland Park staff in the summer workshop of 1967 was used during their first faculty meeting of the year and again at a later meeting when the superintendent was a guest.

In most schools, faculty meetings occur regularly or they are called by the principal who determines the agenda. In Highland Park, several meetings during the 1967-68 year were initiated by faculty members, not the principal. One report of this new practice can be seen in Appendix E.

RELATIONS AMONG ROLES

Hypothesis 5 asserted that the Highland Park staff would develop more productive working relationships among the several positions in the formal role structure. In addition to the new modes of coordination already described under earlier headings, the Teach Group also provides evidence for this hypothesis.

Prior to our intervention there was a group of about eight teachers, most of them area coordinators, known as the Teach Group. They were granted freedom to alter schedules, classroom groupings, assignment of teachers to classes, and other logistics, in an attempt to maximize their educational impact on their students. This group was envied and misunderstood by many. Others on the faculty, far from wanting to emulate the Téach Group, exhibited resistance toward their ideas and a desire to devalue them.

We count it as evidence of increased efficacy of communication and problem solving that the conflict over the Teach Group received attention from the faculty as a problem with which they would have to deal and that progress was made toward enhancing the desirable effects of the Teach Group's operations. We found that the planning for the 1968-69 year included a commitment to expand the teach-group method of collaboration to about twice as many teachers. Furthermore, we found that two new teachers had decided to form a small team themselves to gain some of the advantages of sharing resources. We do not know the extent to which our training interventions led to these developments, but we do know that the teach-group idea was expanded.

A very important change in role structure at Highland Park was the institution of an additional vice-principal. Impressed with the potentialities for collaborative work among teachers, within or among areas, the Principal's Advisory Committee sought a way of maintaining the increased intrafaculty communication and collaboration for curricular planning that had come about. They chose to center these functions in a special role, namely vice-principal for curriculum. He was to act as consultant on interpersonal relations to task groups within the staff. The role also called for providing liaison between groups, providing logistic support for curricular efforts, transmitting to upper echelons in the district the proposals for curricular development originating at the school, and serving as liaison with other junior high schools in the district concerning curriculum innovations. This new vice-principal was asked by the superintendent to maintain a log of his activities and to develop a job description for possible use in other schools. This was done, and the school board granted funds for this position in several other junior high schools. The curricular vice-principal at Highland Park then was asked to aid the other new vice-principals in learning the new role. Still other schools in the district have requested funds for organizational development training and the introduction of the facilitator role as a vice-principalship.

PROBLEM SOLVING AT LOWER LEVELS

Hypothesis 6 asserted that when a proposal for a new way of doing things was initiated by a staff member he would more frequently test his idea with a formally established subgroup before carrying the idea to the administration. It is difficult to find instances of this kind of discussion without being present at a great many meetings in the school. Nevertheless, we can cite the manner of deciding on the 1968 summer workshop (mentioned earlier) which was discussed within area groups to a considerable extent before the idea was taken to the principal for a formal decision. Another example (also mentioned earlier) was the request for a new coordinator.

Still another instance was the way in which the staff decided on criteria for the school honor roll by first discussing the matter in area groups and later making the decision quickly (in fifteen minutes) at a meeting of the total staff. In the case of this hypothesis, we cannot cite comparative data from earlier in the year or from other schools.

CLASSROOM APPLICATIONS

The seventh hypothesis stated that some of the new forms and methods

would have effects on classroom instruction. To satisfy requirements for academic credit, fourteen persons wrote essays on the outcomes of the workshop; of these, eight persons described specific uses they had made of group-process techniques learned in the workshop in their own teaching.

Application typically involved such group procedures as (we quote phrases from the reports) "using small groups for projects," "using nonverbal exercises to depict feelings about the subject matter being studied," "using theater-in-the-round or fishbowl formations for having students observe one another," "using a paraphrasing exercise to point out how poor classroom communications are," "using the problem-solving sequence and techniques in social-studies classes to learn more about social problems," and "using small groups for giving and receiving feedback about how the class is going." As far as we know, none of these practices was used by these teachers before the laboratory in organizational development. Also, several teachers who wrote essays mentioned various indirect effects of the workshop in their teaching. During the fall interviewing, furthermore, many teachers other than the essay writers mentioned group activities and communicative skills that they found useful in their classroom teaching.

Our seventh hypothesis did not explicitly mention direct applications of methods of handling groups to teaching in the classroom. At the beginning of the project, we did not expect that applications would be so direct. However, we felt that making applications to the individual classroom a direct goal of the interventions would be more than it would be reasonable to try to achieve, given the scope and resources of the intervention we were able to mount. We even thought it might interfere with the ability of the teachers to plan the kinds of applications toward which we did point our training. When considering, in the summer of 1967, the kinds of applications to teaching that might follow from the initial workshop, we had in mind indirect effects such as coordinated planning by two or more faculty members that might facilitate the learning activities in another teacher's classroom. Although we do think that skills for more effective communication in groups can be a great aid in designing more effective learning experiences within a single classroom, we did not design the workshop to produce such procedures. We included no exercise in making use of ideas about group dynamics in their classroom teaching. Furthermore, references to classroom teaching during the intervention were brief and entirely at the verbal level. Finally, the trainers at no time made a point of urging the teachers to try to apply the modes of communication they were learning to their work as instructors.

Contrary to our expectations, one of the first kinds of events we heard about when we conducted interviews in Highland Park in the early fall was the application a number of teachers were making to altering sound arrangements within the classroom for the purpose of making their instruction more effective. Enough teachers made this kind of application and felt that there was sufficient value in it that the faculty agreed that this kind of focus should become one of the two chief goals of the staff-initiated workshop to be held in August of 1968.

Teacher-training courses are notorious for having little effect on the practice of teaching. In our experience, teacher-trainers boast when they receive evidence that even one student modifies his mode of teaching because of a methods class.

In contrast, our training was not directed toward change in the classroom. However, we accumulated evidence during the fall that at least nineteen teachers made some deliberate changes in their classroom procedures, using ideas they had gained in the summer workshop. Further, Bigelow (1969) carried out a replication of the Highland Park training in a junior high school in another district, and observed, through tape recordings made in classrooms, predicted changes in the behavior of teachers and pupils.

We recommend that careful studies be made of the application of the Highland Park model to the purposes of training teachers in classroom methods (see Schmuck 1968).

We pause here in our narrative to say a few words about this enumeration of organizational events at Highland Park. The reader will have noticed that we have often cited one event as supportive evidence for more than one hypothesis. Naturally, events in the real world are multifaceted. If a teacher tries something new in a classroom, there are many kinds of procedures he can use. Each procedure can have many combinations of characteristics. In listing and discussing the changes at Highland Park, we are not claiming support for any one hypothesis according to the *number* of such events that took place. Our claim for validity rests on the total pattern and on the *nature* of these events, i.e., that they are the *types* of events our hypotheses predicted.

VOLUNTARY REPORT

We have recounted the organizational changes which came to our attention as being significant at Highland Park during 1967-68 and which were clearly the kinds of events falling into the classifications mentioned in the original eight hypotheses. Two additional outcomes were relevant to our hypotheses, though not obviously anticipated by them; and their

occurrence gives evidence that processes operate in the faculty of the sort predicted by our theory. These two events were (1) a report made by three of the staff to the annual meeting of the research division of the Oregon Education Association (OEA) and (2) the very low turnover figures for the staff at the end of the 1967-68 year.

At the 1968 meeting of the research division of the OEA, panel members from Highland Park described their views of our project. An appearance at the meetings was proposed by the Highland Park staff, not by CASEA; we do not know whether the original suggestion came from the faculty or the principal.

At the meeting the principal gave an overview of the project; he was followed by one teacher, an area coordinator, who described some of the uses teachers in the schools had found for the skills they had learned during the year. Another teacher, new to the school in 1968, described the evidence she saw for the improved socialization effects of the summer workshop on new teachers.

This event offers some indication that the use of new interpersonal norms in Highland Park was more than superficial. The uniqueness of the report to the OEA conference was verified by two members of the central-office staff who were interviewed by a CASEA staff member. Some members of the district had previously reported on individual projects to professional organizations, but a group reporting on an organizational project to a research conference—this was indeed a unique occurrence. A more detailed account of the report, including statements by the conference participants, can be found in Appendix E.

TEACHER TURNOVER

One training goal at Highland Park was to increase staff members' skills in using each other to solve organizational problems. One way to improve problem-solving skill is to make maximum use of the resources that reside in the members of the group. When a person's abilities are being used to benefit himself and others, he usually feels this is a highly rewarding experience and wishes to continue in this kind of association with others. As a result, it would be reasonable to predict that staff members would increase their feelings of attraction to the job.

There are many other reasons for sticking to a job other than the personal satisfactions one finds in it. Nevertheless, faculty turnover this year was remarkably low compared to other years.

As of July, 1968, departures from the staff numbered six. Two teachers had received academic awards that would support them in travel and study in Europe for one year. One was offered a post on the superintend-

ent's staff. A fourth, the head custodian, was asked by the central office to transfer to a high school. A fifth had agreed at the time of her employment in 1967 that she would move from Highland Park to another school in midyear, and she did so; she elected to stay at the other school in 1968-69. Finally, one teacher who had requested a transfer to a different school each year for two years made a third such request in the spring of 1968; she was one of the staff members who had not been at the workshop in the summer of 1967.

In sum, six persons asked or were asked to leave the Highland Park staff. There seems no reason to doubt that four had strong inducements from outside the school—travel grants or offers of jobs within the district of sorts that are commonly considered advancements in career. Resignations among other schools in the district to which Highland Park belongs are compared in table 5-1.

TABLE 5-1
Resignations from the staff at Highland Park and at other junior high schools of the same district as of July 1, 1968.

School	Total Teaching Staff	Resignations	Percent
A	53	9	16
B	47	5	10
C	50	5	10
Highland Park	52	2	3
		Mean:	10

SPONTANEOUS ORGANIZATIONAL CHANGE

Hypothesis 8 asserted that some of the new organizational forms and methods used at Highland Park would occur spontaneously. One of the key aspirations in the training design was that we would not be satisfied simply to accomplish a change in perceptions or attitudes at Highland Park. We felt that our mission would be most completely accomplished if "favorable" events occurred without help. Of course, at the same time, spontaneous organizational changes were even more than we hoped for in this project.

We collected much perceptual and attitudinal data (which will be presented in chapter 6) to help us understand the organizational changes that occurred. Even if no favorable organizational effects had occurred, we would still have studied these psychological data, if for no other

reason than to try to learn why some organizational change did not occur. However, no matter how favorable the distribution of answers in these psychological data, it would not be sufficient for us to rate the organizational training a clear success. Our primary intention was not to obtain favorable ratings from the participants, but rather to test whether it would be possible for a staff to produce new patterns of organizational behavior.

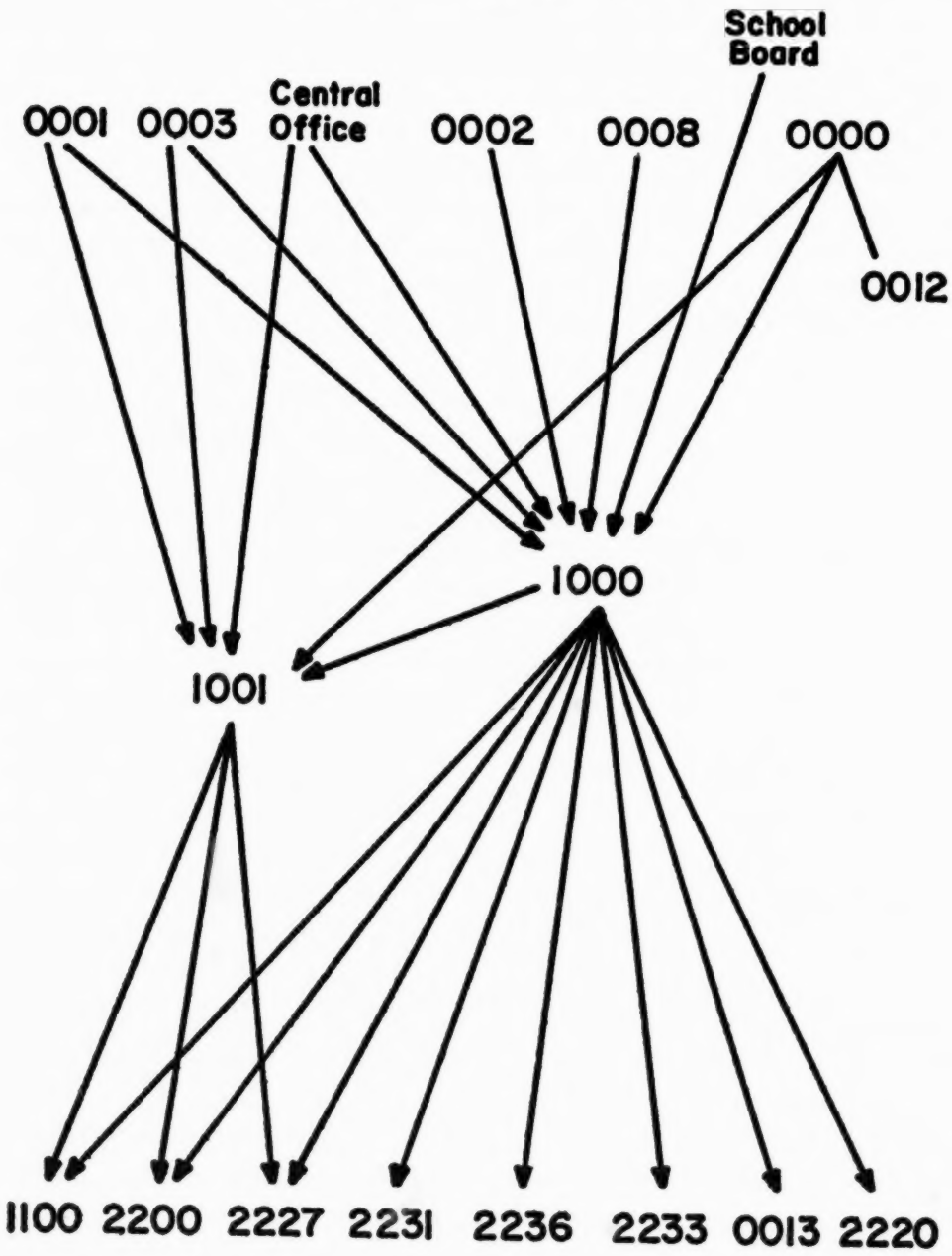
This stringent criterion causes us to be only partially satisfied with expressions of opinion taken by questionnaire or interview. Responses to questionnaires can help investigators to understand what is going on among the respondents, but these responses can never comprise an adequate test of the ability of the group to act independently of the investigator. The most valid measures in this sense are unobtrusive, nonreactive measures (Webb et. al. 1966) of which the spontaneous natural events we have listed are examples.

STABILITY OF THE AUTHORITY STRUCTURE

On the last day of the summer workshop, a questionnaire was administered eliciting information about communication networks as staff members remembered them to be in the spring of 1967. The instrument used appears in the communications section of Appendix F. Similar questions were incorporated in the version of the instrument developed in Project Baseline (CASEA Project 5-0217-1-1) and administered to the Highland Park staff in May, 1968 (Appendix G). Some of the questions in these instruments sought to obtain a description of the authority hierarchy by asking each person to name others who gave orders or directives orally to him. We wished to ascertain those channels for orders which were known directly to each person. We also wanted to ascertain the clarity with which each person perceived the channels through which orders came to him. This combination enables any one link to be identified by more than one person; in other words, a second and third person naming a link provide something of a corroboration of the report of the first person.

The linkages shown in figure 5-1 are those reported by at least two persons. It is important to note, in connection with figure 5-1, that respondents were not free to mention any linkage they might have known about. They were asked only about linkages to the person who gave them orders or to the person who gave *that* person orders, and so forth. In short, they were asked only about links in the authority hierarchy that led down to themselves.

FIGURE 5-1
Channels perceived by more than one person as channels of orders and directives: Highland Park in spring of 1967 as reported by respondents in August of 1967.



In figure 5-1, person 0000 is the superintendent. Persons 0001, 0002, 0004, and 0008 are central-office personnel. Person 1000 is the principal, person 1001 is the assistant principal. Persons 2227, 2243, 2231, and 2236 are area coordinators. Person 1100 is director of guidance. The link between the superintendent and principal was corroborated by twenty other persons; the link between the principal and the assistant principal was corroborated by fifteen other persons, as was the link between the principal and the director of guidance. The link between the central-office member number 0001 and the principal was corroborated by six other persons.

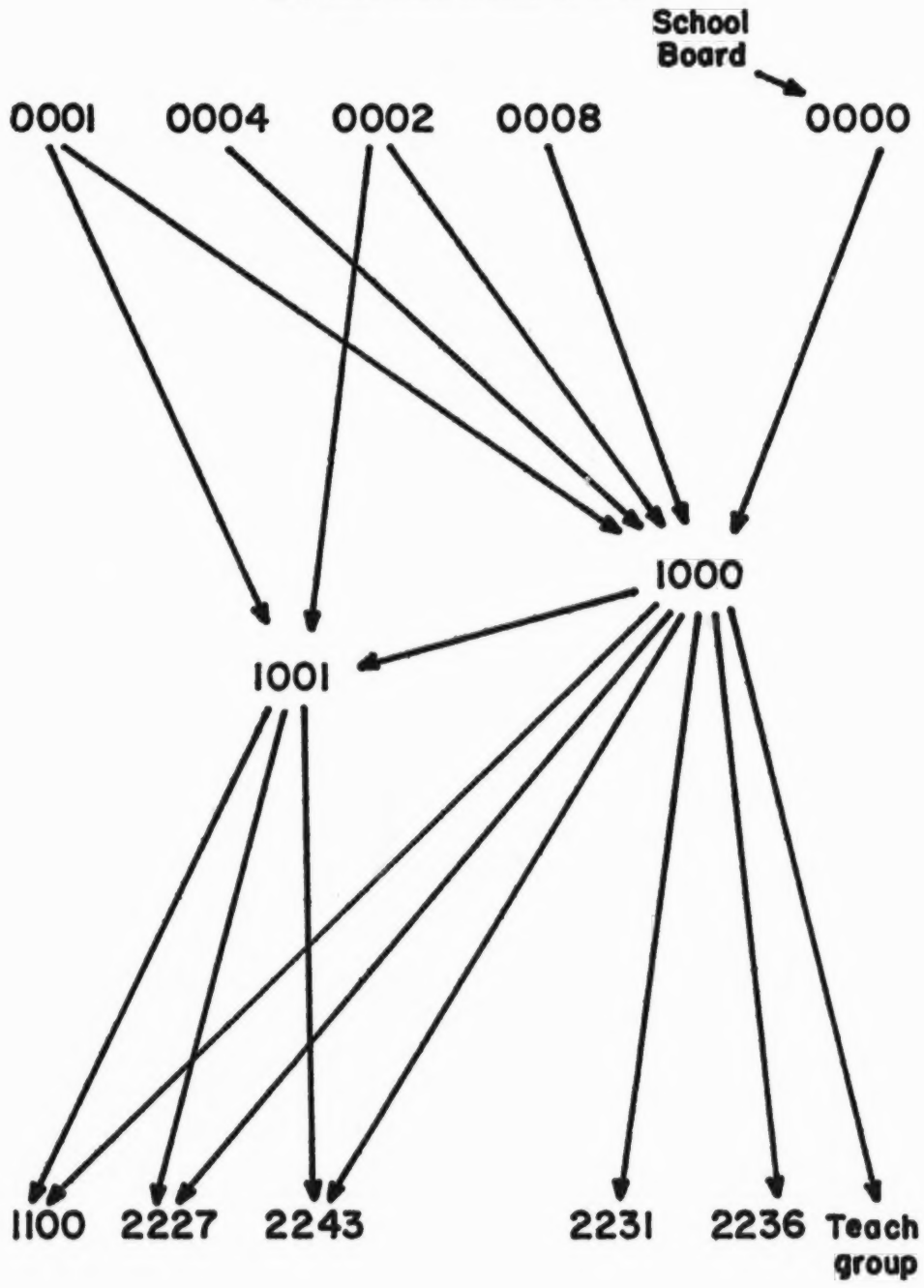
We were *not* acquainted with the organization chart for the district to which the Highland Park School belongs. We suppose that some of the central-office personnel diagrammed in figure 5-1 were conceived to be advisory to the principal rather than to give orders to him. Nevertheless, each link shown was perceived by at least two persons as an order-carrying link.

The hierarchial linkages reported by at least two persons in May of 1968 were quite similar to those reported a year earlier. The linkages in 1968 are shown in figure 5-2. As before, the number 0000 represents the superintendent. The numbers 0001, 0003, 0002, 0008, and 0012 represent central-office personnel. Again, 1000 is the principal, 1001 the assistant principal, and 1100 the director of guidance. Numbers 2200, 2227, 2231, and 2236 are area coordinators. Numbers 2233 and 2220 are teachers. The link between the principal and the director of guidance was noted by eleven, between the central-office person 0008 and the principal by eight, between the administrator 0001 and the principal by seven, and between the administrator 2227 and the principal by seven.

The figures 5-1 and 5-2 show only the links mentioned by more than one person. Because of the wording of the questions, most of the order-transmitting links indicated would be mentioned only by the one person at the receiving end of such a line; therefore, most of the links mentioned do not appear in these two figures. We also analyzed the patterns of links mentioned only by one person in 1967 and 1968. We do not discuss them here because the conclusions they imply are the same as those to be drawn from figures 5-1 and 5-2.

In terms of who gives orders to whom, the perceptions charted May, 1968, are not significantly different from those described in August, 1967. In both, the principal is seen by his faculty as receiving orders directly from a member or members of the superintendent's office. At both times the assistant principal, too, is perceived to receive orders not only from

FIGURE 5-2
Channels perceived by more than one person as channels of orders and directives: Highland Park in May of 1968.



the principal, but also directly from two or more members of the superintendent's staff. At both times, the principal and the assistant principal are perceived as giving orders or directives to a number of area coordinators and to one or two presumably influential teachers. (The teachers appearing in the two figures must have been mentioned by at least two other persons as being persons who gave orders to someone else.)

In general, the differences in the official or proper channels for conveying orders and directives between spring of 1967 and May of 1968 are not significant. Nevertheless, we have already seen that there were definite changes in communication processes and organizational structures for problem solving. The fact that we find no important changes in the perceived structure of the information flow shows that many new things can get done without much formal reorganization of statuses and positions. It also indicates that the perceptions on the part of the Highland Park staff of "order giving" are rather distinct from other activities such as group problem-solving, holding staff meetings, obtaining information, and making use of the resources of one's colleagues. In brief, communication and problem solving in a school can be measurably improved without changing the formal hierarchy of responsibility for direction.

PERCEPTIONS OF CONFIDANTS

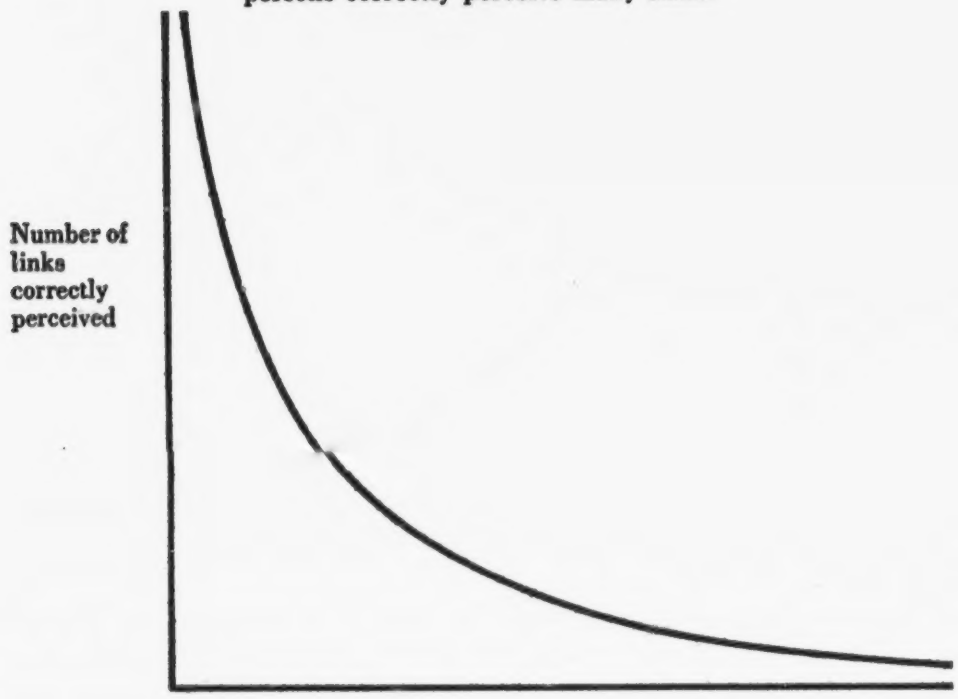
One of the instrumental goals of the training activities was to increase the number of communication linkages that carried useful information. At Highland Park, as in so many other organizations, many potential communication links were closed by fears, hostilities, misperceived or actual norms, or by sheer lack of skills. Since human communication can be hazardous and threatening under even the best conditions, coordination increases in an organization if the links which carry valid information and the links that tie members into the organization are increased in number.

When an organization has only a few effective communication links, the persons involved in those links are usually perceived as powerful (often realistically) or at least as potentially powerful. They are the ones who control information; consequently, organizational members will become aware of at least some of these links. At the same time, because of an uneven distribution of information, some actual communication links will become widely known while others remain hidden.

Members of organizations with inefficient communication may not accurately perceive many of the communication links. In fact, most potential links in the ineffective organization do not carry information, or

carry little reliable information, whether or not organizational members are accurate about them. There also will be a few links that carry much useful information. Most members, however, will report active communication in only a very few links. The distribution would look like figure 5-3.

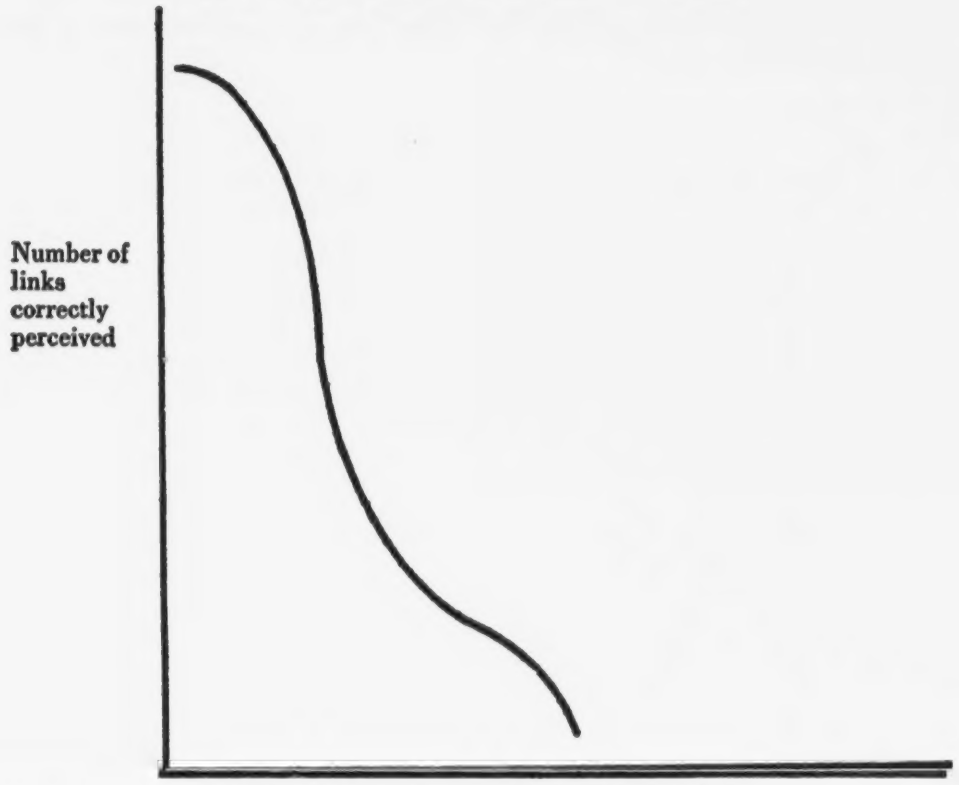
FIGURE 5-3
Shape of distribution when many persons correctly perceive very few communication links and very few persons correctly perceive many links.



The effective organization, on the other hand, has many active communication links. The number of potential links perceived as actually carrying no useful communication is greatly reduced; moreover, the number of links perceived by a great many people to carry important communication is also decreased.

The reason for the latter effect is that more people would be communicating with a moderate number of immediate "communication neighbors" and thus would tend to report about those colleagues when asked. In the less effective organization, more people watch the same "stars," while in the organization with widespread communication, the attention

FIGURE 5-4
Shape of distribution when correct perception of communication links is more widespread.



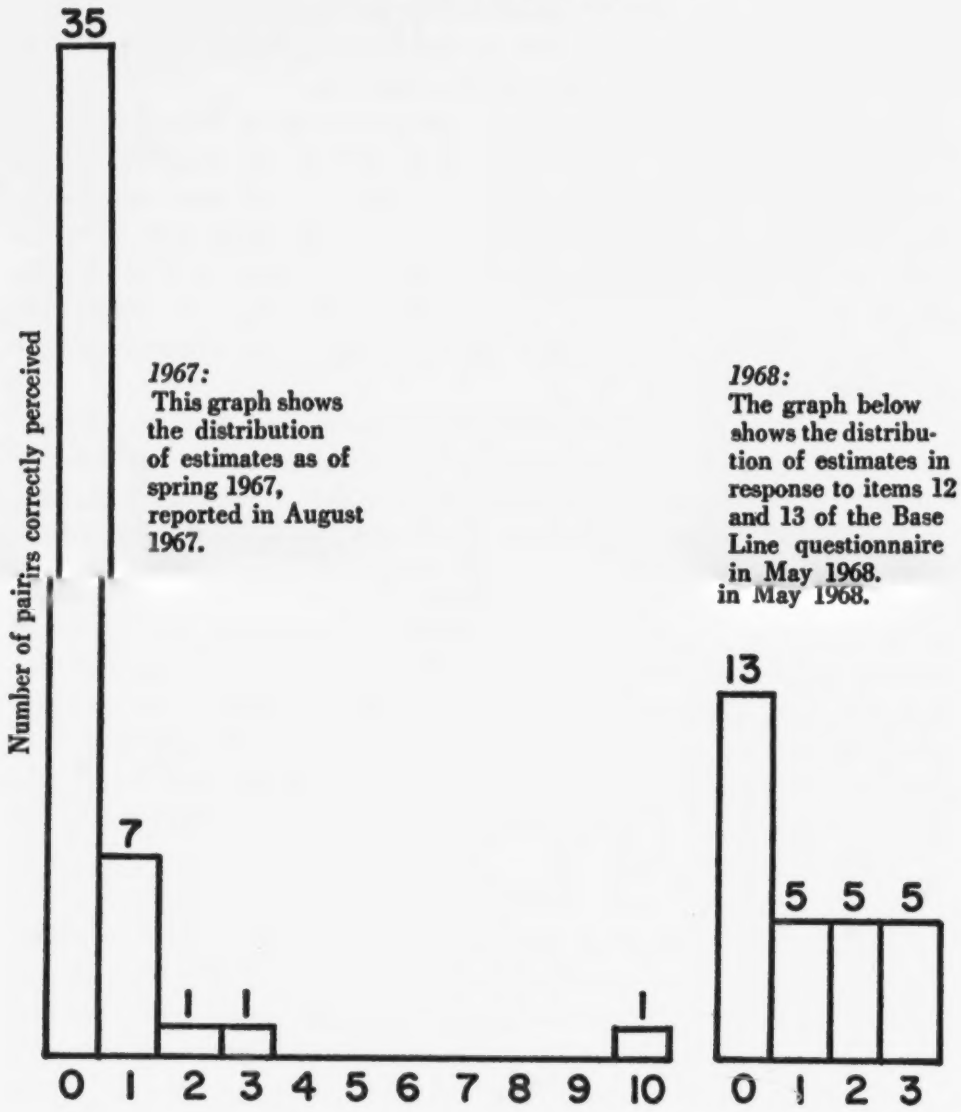
of members focuses more on their neighborhood of colleagues. Consequently, in the effective organization, the distribution of communicating pairs and perceptions about them would have more the shape of figure 5-4.

Since the training activities at Highland Park were intended to increase the number of effective communication links, we predicted that charting the number of persons correctly aware of the verbal communication between two persons (where the talking was about serious or important matters) would shift from the shape of figure 5-3 in 1967 to the shape of figure 5-4 in May of 1968. The questions used to collect the data are shown in the caption of figure 5-5; they can be seen in the original context in question 3 of the communications section of Appendix F.

The results of the analysis, summarized in figure 5-5, show that the shape of the distribution did change in the expected manner. It can also be noted that the number of correctly perceived links increased from ten in 1967 to fifteen in 1968.

FIGURE 5-5

Responses of Highland Park staff at two times to "To whom do you talk seriously about things important to you?" and, among those named, "Which of those do you think talk seriously to each other about things important to them?" The number at the base of each vertical bar tells the number of persons correctly saying that two other persons talk. The height of the bar tells how many talking pairs were correctly named by the indicated number of persons. In these graphs, a pair was taken as a talking pair only if both members reported it so.



1967: This graph shows the distribution of estimates as of spring 1967, reported in August 1967.

1968: The graph below shows the distribution of estimates in response to items 12 and 13 of the Base Line questionnaire in May 1968.
in May 1968.

(In analyzing the data for figure 5-5, a pair was taken as a "talking pair" if *both* members reported that they talked to each other about matters important to them. A similar analysis can be made using pairs named only by one member of the duo. The latter analysis was performed and yielded the same conclusions we have already drawn.)

The nature of the pairs represented in figure 5-5 sheds additional light on the effects of the training. The one pair correctly perceived by ten others in 1967 consisted of an area coordinator and a teacher in that discipline. The pair correctly perceived by three persons also contained an area coordinator and a teacher in that field, while the pair correctly perceived by two persons contained two teachers.

In contrast, the five pairs each correctly perceived by three persons in 1968 contained as one pair the principal and an area coordinator, as another the director of guidance and a teacher already mentioned, as a third that teacher and another teacher, as a fourth pair another area coordinator and a teacher, and as a fifth pair a counselor and a teacher. Clearly, more of the Highland Park staff in 1968 agreed that talking "seriously about things important" involved administrators and specialists than in 1967.

We have not applied a test of statistical significance to this outcome. The complexities of the question plus the combinatorial complexity of the prediction we made prohibit ascertaining the sampling distribution of chance results. At the same time, these very complexities make it unlikely that the outcome shown in figure 5-5 could have even a moderate probability of occurring by chance. Furthermore, since so much evidence already presented has supported our theory and hypotheses, information about exact levels of statistical significance are not so useful as they would be had our evidence been scanty or ambivalent. By and large, our data reveal a consistent picture of supportive results and the results shown in figure 5-5 fit in with the rest of the picture displayed by the data from Highland Park.

Later Reports

Formal data-collection at Highland Park ceased in May of 1968, but we continued to receive informal reports of events. We have already mentioned, for example, the establishment of the assistant principal for curriculum at Highland Park and subsequently elsewhere in the district. We now describe other events that were conveyed to us primarily by the principal. They seem to be especially clear examples of continued and appropriate use of group problem-solving, use of the human resources of the school, and an attitude of flexible and innovative adaptation to environmental demands.

THE PRINCIPAL'S ADVISORY COMMITTEE

As the Principal's Advisory Committee became more of a problem-solving group, they felt that meetings should last long enough to permit indepth examination of problems. They got this block of time by meeting at 6:30 A.M. once a month at a local restaurant. These meetings ran for two and one-half hours. This schedule continued throughout 1968-69. Members very rarely missed these meetings; when an area chairman could not attend, he asked a member of his subject area to take his place and he paid for the breakfast of his substitute. On several occasions, general faculty members were invited to attend these meetings; typically, two or three would appear and participate.

THE ADMINISTRATIVE TEAM

When the new assistant principal for curriculum was appointed, a new weekly meeting was established. The new assistant principal, the vice-principal, the director of guidance, and the principal met every Monday at 10 A.M. These meetings gave everyone in the administrative team (as they came to think of themselves) the benefits of discussing plans with others with whom they were highly interdependent.

THE NWREL CONFERENCE

An incident in the latter part of February, 1969, illustrated Highland Park's problem-solving abilities. The central office asked Highland Park if it could provide room for approximately 100 educators who would be participating in a conference sponsored by the Northwest Regional Educational Laboratory (NWREL). Other schools in the district, citing insufficient space, turned down the central office.

The principal called together the area chairman for physical education, the cafeteria manager, the assistant principal for curriculum, the vice-principal, and the chief custodian. A solution was found within an hour. A class in physical education, usually taught separately for boys and girls, could be taught with both groups together in the gymnasium except for the lunch periods, when the gymnasium had to be used as a dining hall. During these periods, however, the band room was available. The cafeteria manager decided she could provide lunch for the visitors with the addition of one temporary person to her staff. The plan was described to the central office, who sent a representative to meet with the Highland Park group and work out a detailed schedule for the occasion.

During the actual conduct of the visiting conference, the principal was out of town. The assistant principal for curriculum acted as host. Though there was some inconvenience to the music department, members of the

conference expressed gratification with the hospitality they received. The central office sent the Highland Park staff a letter of appreciation, stating that it would not have been able to host the conference without the problem-solving ability of the Highland Park staff.

SCHEDULE BUILDING

Another episode illustrates the use of faculty resources at Highland Park. When school reconvened after the Christmas holidays in 1969, the principal asked his administrative team to consider what improvements might be made in the schedule of classes. The administrative team decided to carry the question to the Principal's Advisory Committee. The members of the committee, in turn, decided to discuss these questions with the members of their areas. Each area chairman then prepared a report for the Principal's Advisory Committee.

The committee began to hear the reports at one of their regular Wednesday morning meetings. However, they discovered they could hear only two reports an hour and they suggested that a meeting be held the next Saturday from 9 to noon. It was agreed that the reports would not be debated or discussed at that time, but accepted as information. At the Saturday meeting, one person left at 12:30, several at 1 P.M. and three or four people continued the discussion until 3 P.M.

The administrative team then worked out plans for conveying to the rest of the faculty the results of the Saturday conference. At the end of three weeks, they had worked out three alternative plans and presented these to the advisory committee. The advisory committee rejected all three proposals and produced one of their own.

First, they gave up their released time ordinarily used for visiting other schools and used it to hold a meeting running from 8 A.M. to 4 P.M. At this meeting, they pooled ideas on changes they would like to see in the following year's schedule. By 4 P.M. they had recorded their ideas in a form suitable for presentation to the total faculty by means of the overhead projector.

Second, a meeting of the entire faculty took place the next morning at 8 A.M. The area chairmen presented their ideas and the principal announced that a rough report of the proceedings would be in everyone's hands by noon.

Third, a meeting of the faculty was held the next Friday for discussion of this input.

Several ideas that came out of these meetings were incorporated into the next year's schedule. (1) An intramural sports program for eighth graders was built into the school day. (2) Four to six mathematics classes

at one grade level were scheduled at one time, thus enabling more individualized instruction to take place. (3) In ninth-grade English, students elected a series of three nine-week courses, each selected from a major area of study, and a fourth nine-week elective course to be selected from any of the three areas or from a fourth. This scheduling was extremely complex but was successfully carried out.

These examples suggest to us that the Highland Park staff was continuing into a second year the conscious use of group resources that was evident in the data taken during the first year.

Finally, the project continued to have a strong effect on the principal. He decided to return to graduate school to increase his knowledge and skill in the field of organizational development. In the summer of 1969, he joined the staff of the Program on Strategies of Organizational Change at CASEA.

Summary

The eight hypotheses of this study were supported by concrete instances of organizational changes at Highland Park. There was evidence of change in the new roles for area coordinators, in the new vice-principalship, the new forms and uses of faculty meetings, the 1968 summer workshop in group processes, faculty-initiated meetings, the expansion of team-teaching groups, and numerous classroom innovations. Indications of some desirable side-effects of the project were seen in the report by three Highland Park staff members to the Oregon Education Association and by the extremely low rate of faculty turnover for the year.

The results also showed that communication and group problem-solving in a school faculty can be improved without changing the formal hierarchy of responsibility for giving and receiving directions. Differences in the official channels for conveying orders between spring of 1967 and spring of 1968 were not significant. At the same time, the training did affect the number of effective communication links on the Highland Park staff. Over the course of the year, the staff became more accurate about existing communication channels. This facilitated the wider use of staff resources and the emergence of more team-teaching groups.

Many of the organizational changes that occurred required much time and effort on the part of the Highland Park faculty. Their persistence, two years after the initial training event, presents a pattern that testifies to real organizational effects having been produced by the intervention.

6

Comparisons With Other Schools

IN the previous chapter we discussed outcomes consisting chiefly of spontaneous events. We turn now to data elicited through formal questionnaires and interviews. We have compared some of these data at both pretest and posttest stages with data of the same sort taken from junior high schools in the area of New York City; another part was compared with similar data elicited only at one time from junior highs near Seattle; and still another portion of the data comes from pretests and posttests at Highland Park only. This chapter is divided according to these comparisons.

Comparisons with New York City Area Schools

To assess changes in the behavior of the principal and changes in staff meetings, we were able to administer, before and after the training, well-known questionnaires widely used by other social scientists and to compare changes at Highland Park with changes at other junior high

schools in which the same instruments were given early and late in the previous year. We could do this through the kindness of Matthew Miles and his associates of Teachers College, Columbia University. In October of 1966 and again in May of 1967, Miles and his associates collected data in several junior high schools near New York City. We had the Highland Park staff members fill out the same questionnaire in August, 1967, and then again in May of 1968.

The two questionnaires that were used were: (1) *The Principal of This School,* composed of items used by Gross and Herriott (1965) in an extensive study of principals, and (2) *The Staff Meetings in This School.*

THE PRINCIPAL OF THIS SCHOOL

Gross and Herriott examined the consequences of the professional leadership exhibited by elementary school principals on the operation of their schools. To measure the effects of the leadership behavior of principals on their staffs, the researchers examined the relationship between the principal's scores on a measure of Executive Professional Leadership (EPL) and three characteristics of schools that are widely accepted as meaningful criteria for assessing their effectiveness: staff morale, the professional performance of teachers, and the students' learning. Gross and Herriott found positive and significant relationships between EPL and each of these three variables.

The key concept of Gross and Herriott's study was defined as the efforts of a principal of a school to conform to a definition of his role that stresses his obligation to improve the quality of staff performance. The facet of the performance of school principals that was studied concerned the principal's efforts to improve the quality of the performance of his staff. We believed that improvement in the EPL scores of the principal of Highland Park would indicate partial success of the organizational training program.

The history of Highland Park School indicated that the principal was viewed by many staff members as lacking much EPL. Before he arrived, some teachers were concerned that under his leadership the school would be run in a rigid, authoritarian manner and that little innovation in classroom instruction and group processes would occur.

The CASEA staff felt that such a gloomy and unproductive relationship between the principal and a large part of the staff would have to be changed to make the effects of the training program lasting and supportive. Thus much of the training was aimed at increasing two-way communication of feelings between the administrators and the teachers. The training also focused on increasing the group-effectiveness of the

Principal's Advisory Committee and on increasing the communicative linkage between administrators and teachers by training the area coordinators in communication and problem solving.

In August, 1967, and again in May, 1968, Highland Park staff members who had had at least one year of experience with the principal completed the questionnaire titled, "The Principal of This School" (see Appendix H). The twenty-four items in the questionnaire were developed by Gross and Harriott.

Two types of statistical analysis were applied to the pretest and posttest data from this questionnaire. First, we were interested in whether the principal had changed. To estimate this, we applied a sign test to every item. (We were not able to apply the sign test to the New York data because we did not have individual scores on every item.) Second, after the first analysis showed a number of positive changes, we set out to compare Highland Park with the New York junior high schools by chi-square analyses of pretest and posttest response distributions.

In the analysis using the sign test, we began by placing individuals' responses showing either no change from pretest to posttest or showing deterioration in one category and responses showing improvement in another. An item was considered to indicate a significant change in the perception of the principal if the number of teachers changing on the item was a number at or beyond the .05 level in the tabulation of values of the sign test.

This analysis revealed that perceptions of the principal had changed significantly on five items in the positive direction. Four of these items had been taken from Gross and Herriott's EPL scale. The five, numbered as they are in Appendix H and table 6-1, were:

4. Makes teachers' meetings a valuable educational activity
7. Helps teachers to understand the sources of important problems they are facing
9. Brings to the attention of teachers educational literature that is of value to them in their jobs
12. Maximizes the different skills found in his faculty
13. Makes a teacher's life difficult because of his administrative ineptitude (The positive direction is a *decrease* in agreement with this item.)

Further indications of positive change were noted in a second analysis also using the sign test. Only items showing change were included in this analysis. Treated this way, three more items showed positive change at a probability of random occurrence less than .05, while five showed positive change at a probability less than .10. The first three were:

14. Runs conferences and meetings in a disorganized fashion (Decreased)
15. Has relevant facts before making important decisions
19. Displays integrity in his behavior

The five items showing positive change at a probability less than .10 were:

10. Has constructive suggestions to offer teachers in dealing with their major problems
11. Gets teachers to upgrade their performance standards in their classrooms
18. Requires teachers to engage in unnecessary paper work (Decreased)
20. Puts you at ease when you talk with him
24. Rubs people the wrong way (Decreased)

These data indicate favorable changes on thirteen of the twenty-four items concerning the principal. *No items* showed a significant negative change during the school year.

To carry out a comparison of the teachers' responses to this questionnaire at Highland Park with the staffs of six other junior high schools near New York City, we performed a series of chi-square analyses. For every item and every school, we let the pretest results be the estimate of expected (or "theoretical") proportions against which to test the proportions obtained at the posttest. The directions and significances of all these chi-square analyses are reported in table 6-1. The results leave little doubt that the Highland Park staff changed their perceptions of their principal much more than did any of the other school staffs.

At Highland Park, the teachers changed significantly* on eighteen of twenty-four items; more importantly, *every one* of these eighteen changes was in the positive and supportive direction. Contrast this with the results of the other schools. In no school, except for school F, did the teachers change on more than half of the items. Furthermore, in schools A, B, C, and D, most of the changes were in a negative direction, indicating that the principal was being viewed less in accord with the EPL ideal at the end of the school year than in the fall. The staffs of schools E and F did change more positively than negatively, but E changed positively only on five items and F changed positively only on nine. These pat-

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* In this comparison we use a chance probability of .10 as the level of statistical significance. This gives the benefit of the doubt to the other schools, since only one item changed at a probability between .05 and .10 at Highland Park, while five out of six of the other schools had at least two items and as many as five in that range.

TABLE 6-1

Direction and significance of changes in teachers' responses to the questionnaire about the principal in Highland Park between August of 1967 and May of 1968 versus changes in six junior high schools near New York City between October of 1966 and May of 1967.

Item	*Highland Park* df	p	d	*A* df	p	d	*B* df	p	d	*C* df	p	d	*D* df	p	d	*E* df	p	d	*F* df	p	d
1		NS			NS		4	<.004	+		NS			NS		2	<.05	+		NS	
2		NS		2	<.008	−		NS		4	<.004	−	4	<.003	−		NS		4	<.009	+
3	4	<.001	+		NS			NS		4	<.04	−	4	<.05	−		NS		4	<.009	+
4	2	<.001	+		NS			NS		4	<.06	−		NS		2	<.001	+	3	<.08	+
5		NS			NS			NS			NS		4	<.001	−		NS		3	<.07	−
6	2	<.009	+	2	<.02	−		NS		3	<.08	−	3	<.05	−		NS		3	<.03	−
7	3	<.001	+	3	<.003	+	4	<.02	−		NS		4	<.04	−		NS			NS	
8		NS			NS			NS		3	.09	−	4	<.002	−		NS		3	<.09	−
9	3	<.001	+		NS			NS			NS			NS			NS			NS	
10	2	<.025	+		NS			NS			NS			NS			NS			NS	
11	2	<.025	+		NS		4	<.04	−	4	<.08	−	5	<.09	−	2	<.025	+		NS	
12	3	<.001	+		NS			NS		4	<.02	−		NS			NS			NS	
13	2	<.005	+		NS			NS			NS		3	<.001	−		NS			NS	
14	3	<.01	+		NS			NS			NS		2	<.008	−		NS			NS	
15	2	<.025	+		NS		4	<.05	−	3	<.001	−		NS			NS		2	<.004	+
16		NS			NS			NS			NS		2	<.04	−	1	<.04	+		NS	
17	2	<.06	+		NS			NS		2	<.01	−	2	<.06	−		NS		3	<.10	+
18	2	<.04	+		NS			NS			NS		2	<.07	−		NS			NS	
19	3	<.007	+		NS			NS			NS			NS			NS		2	<.09	+

20	3 <.04 +	NS	NS	NS	NS	NS	3 <.02 +
21	3 <.004 +	3 <.07 −	NS	NS	NS	NS	NS
22	NS	NS	2 <.005 +	4 <.004 −	NS	NS	3 <.02 +
23	3 <.005 +	NS	3 <.10 −	4 <.03 −	NS	2 <.01 +	3 <.004 +
24	2 <.04 +	2 <.09 −	3 <.06 −	4 <.01 −	NS	NS	3 <.04 −

df: the degrees of freedom in the chi-square computation. This number differs from item to item because there were sometimes so few choices made of one or more of the six possible responses that computing the chi-square statistic using the original distribution of choices would not have yielded accurate estimates of probabilities. For the reader not interested in the computational procedure, the "df" figure can be taken as the number of alternatives (of six) over which the bulk of the choices was distributed at pretest or posttest or both.

p: the probability that as much change as occurred (or more) would have occurred merely by chance, as computed by the chi-square technique. The rare cases of a respondent skipping an item or giving an untranslatable response were omitted from the computation.

d: the direction of the median response from pretest to posttest, the plus sign indicating the favorable direction (see text).

terns of change are a far cry from the strikingly positive changes at Highland Park.*

These results strongly support our informational observations that relations between staff members and the principal became more harmonious during the year; they also support hypothesis 5, enunciated in chapters 2 and 5. Further, these results suggest that inservice training with entire faculties is one way of increasing EPL scores in respect to school principals.

STAFF MEETINGS IN THIS SCHOOL

The manner in which meetings are conducted often leads to frustrations and grumblings among professional staffs. Meetings are typically

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* The question arises whether the mean change in ratings of principals in the schools in the New York area might have been less than in Highland Park because pretest means were closer to the favorable end of the rating scale and therefore allowed the respondents less room to move toward the favorable end of the scale. To check this possibility, we computed the pretest means for every item in every school. They are displayed in Appendix I. We then looked at the comparative "room to move" in relation to the changes in items from pretest to posttest. In the table below, the first line shows the number of items in each school whose pretest means were less positive than at Highland Park, allowing *more* room to move toward the positive in the New York school. The next line shows the number of items changing positively in each school. If room to move made an important difference, we would expect the numbers in the second row to approach 18 as the numbers in the first row approach 12 or more. (The number 12 indicates that as many items had more room to move than at Highland Park as had less room to move.) However, the order of schools in the first row, in terms of corresponding numbers being close to 12, is FBCD(AE), while the order in the second row, in terms of the corresponding number approaching 18, is FEBA(CD). The rank-order correlation between these two orders is low. We can also order the third row of figures, looking for closeness of the numbers to zero; the order is E(AF)BDC. The correlation of this order with the first row is also low. Consequently, although "room to move" no doubt had some effect, the effect was not regular and did not account for a large portion of the differences found between Highland Park and the New York schools. It is also useful to note from the tabulation of pretest means in Appendix I that few pretest means pressed close to the top positive scale-point of 6.

	School						
	HP	A	B	C	D	E	F
Number of items having more room to move positively than at Highland Park	---	1	12	9	6	1	13
Number of items showing significant positive change (from table 6-1)	18	1	2	0	0	5	9
Number of items showing significant negative change (from table 6-1)	0	4	5	12	11	0	4

viewed as necessary evils that take the educator away from more important tasks.

The CASEA personnel were concerned about staff and committee meetings because they are important formal arenas in which communication and group problem-solving can occur. Moreover, in our early visits to Highland Park, we found that the staff viewed low participation at meetings as an acute problem. We hoped that improvements in the conduct of meetings would occur because of the organizational training.

The Cooperative Project on Educational Development (COPED) formulated a questionnaire to measure educators' opinions about the meetings in their schools; the thirty-seven-item questionnaire appears in Appendix J. A previous analysis by Hagstrom (personal communication) found scores on this instrument to be highly reliable.* However, we did not use scores from this questionnaire. We employed the same method of analysis with this questionnaire on staff meetings as we had with the questionnaire describing the principal.

We first applied the sign test to the pretest and posttest data from Highland Park to see if any significant changes were indicated item by item. We compared responses showing positive change from pretest to posttest with pooled responses showing no change or negative change. In this analysis, we found significant change only on item 13: staff members reported that they were less afraid to be openly critical or to make good objections at the end of the year than at the beginning. When, in a second analysis, we excluded those people who showed no change and analyzed data only from those who had changed, we found many more positive changes. Positive changes with a probability of occurring by chance fewer than one time in a hundred were:

1. When problems come up in the meeting, they are thoroughly explored until everyone understands what the problem is.
10. Someone summarizes progress from time to time.
17. People hesitate to give their true feelings about problems which are discussed. (Decreased.)
23. When the group is thinking about a problem, at least two or three different solutions are suggested.

Positive changes with a probability of occurring fewer than five times in one hundred were:

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* The subtests and total test were analyzed by Warren Hagstrom using Frank Baker's Test Analysis Package at the University of Wisconsin. Using a sample of 625 school professionals, including both teachers and administrators who described a wide variety of meetings and types of meetings, a reliability (Hoyt Analysis of Variance Method) of .963 was found on the total score, .897 on a subscore called Meetings Openness, and .936 on Meetings Powerlessness.

3. People come to the meetings not knowing what is to be presented or discussed. (Decreased.)
22. People don't seem to care about the meeting or want to get involved in it. (Decreased.)
24. When there is a disagreement, it tends to be smoothed over or avoided. (Decreased).
26. Many people remain silent. (Decreased.)
28 The results of the group's work are not worth the time it takes. (Decreased.)
29. People give their real feelings about what is happening during the meeting itself. (Decreased.)

We next compared changes in proportions of opinion at Highland Park with changes in junior high schools in the New York area in the same manner used with the questionnaire about the principal. However, data concerning staff meetings were available from only three of the six comparison junior highs: schools A, C, and D. The chi-square analyses applied to these data are summarized in table 6-2. These results show great differences between the changes at Highland Park and the changes at the comparison schools. Out of thirty-seven items, Highland Park showed significant positive change in twenty one, school A in three, school C in two, and school D in six. Notice also that the changes at Highland Park were almost entirely in the positive direction; among twenty-three significant changes, only two were negative. At the comparison schools, in contrast, the changes were mixed positive and negative.*

Again, the theory that guided these training activities receives support. We believed that the ways in which groups at Highland Park functioned had to be improved before genuine organizational change would be implemented by the staff. We also believed that staff members needed to feel influential and optimistic in initiating bids for changing the organization. An inspection of the changes of responses to the items (table 6-2 and Appendix J) shows that staff meetings did become more effective

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* The question arises whether the mean change in the ratings of meetings in the schools in the New York area might have been less than in Highland Park because pretest means were closer to the favorable end of the rating scale and therefore allowed the respondents less room to move toward the favorable end of the scale. To check on this possibility, we computed the pretest means for every item in every school; they are displayed in Appendix K. We then looked at the comparative "room to move" in each of the schools. Out of thirty-seven items, school A had more room to move than did Highland Park in the case of eighteen items, school C in the case of twenty items, and school D in the case of eighteen items. These numbers are so close to one-half the items that we conclude the schools near New York had substantially the same opportunities to choose more positive ratings on the posttest as did Highland Park.

TABLE 6-2

Direction and significance of changes in teachers' responses to the questionnaire on staff meetings in Highland Park between August of 1967 and May of 1968 versus changes in three junior high schools near New York City between October, 1966, and May, 1968. Some of the items appear in the text, numbered as here; all can be seen in Appendix J.

	Hi'nd Park			*A*			*C*			*D*		
Item	df	p	d	df	p	d	df	p	d	df	p	d
1	3	<.001	+	3	<.03	+	1	<.04	−	3	<.008	−
2		NS			NS			NS			NS	
3	2	<.005	+	2	<.01	−	2	<.001	+	2	<.001	+
4	2	<.001	+	5	<.001	+		NS			NS	
5		NS			NS			NS			NS	
6		NS			NS		3	<.05	−	4	<.08	+
7	3	<.004	+		NS			NS			NS	
8	3	<.025	+	2	<.025	−		NS			NS	
9		NS			NS			NS			NS	
10	4	<.003	+		NS		2	<.10	−	3	<.003	+
11		NS			NS			NS		4	<.10	−
12	4	<.006	+		NS			NS			NS	
13	3	<.001	+		NS			NS			NS	
14		NS			NS			NS			NS	
15		NS			NS			NS		4	<.001	−
16	3	<.003	−	2	<.007	+		NS			NS	
17	2	<.001	+		NS			NS			NS	
18	4	<.006	+		NS			NS			NS	
19	2	<.02	+		NS			NS		3	<.025	−
20		NS			NS			NS		4	<.001	+
21	3	<.02	+		NS			NS			NS	
22	3	<.001	+	2	<.04	−		NS			NS	
23	3	<.001	+		NS			NS		3	<.05	−
24	3	<.001	+		NS			NS		4	<.001	+
25		NS			NS			NS			NS	
26		NS			NS			NS			NS	
27		NS			NS			NS			NS	
28	3	<.001	+		NS			NS			NS	
29	3	<.006	+		NS			NS			NS	
30	3	<.001	+		NS			NS			NS	
31	2	<.005	+		NS			NS		3	<.001	−
32		NS			NS			NS			NS	
33		NS			NS			NS			NS	
34	3	<.04	+	3	<.07	−		NS		4	<.02	−
35		NS			NS		1	<.004	+	4	<.08	+
36	3	<.001	−		NS			NS			NS	
37	2	<.008	+		NS			NS		3	<.03	−
Total		+21			+3			+2			+6	
		− 2			−4			−3			−8	

Note: Table continues on page 112.

at Highland Park and that staff members did feel more ready to initiate contributions to the discussions.

More specifically, the changes in twelve items (3, 4, 7, 8, 10, 12, 19, 21, 23, 28, 30, 37) indicate that the meetings became more productively conducted, while only one (36) indicated that discussions were excessively long. Although one item (16) changed to the contrary, five items (1, 13, 17, 22, 34) indicated more widespread participation in meetings in May than in August; this outcome lends specific support to hypothesis 2. Further, hypothesis 3 concerning increased frequency of discussion of interpersonal relations receives some support from the changes in three items (24, 29, 31) and hypothesis 5 concerning more productive relations between roles receives support from the change in item 18.

Comparisons with Junior High Schools near Seattle

In January of 1968, staff members of CASEA went to two school districts in the suburbs of Seattle. There, primarily for the purpose of another project, an instrument known as the *Base Line questionnaire* was administered to several schools, including four junior high schools. Two of these were in a suburban community we shall call Golden, and two were in another suburban community to be called Valley. We present in the following sections some comparisons between the responses given to certain items of this questionnaire in the junior high schools of Golden and Valley on the one hand, and the responses given to the same items by the Highland Park staff in December of 1967 and in May of 1968 on the other hand. The version of the Base Line questionnaire administered at Highland Park appears as Appendix G.

INNOVATIONS

One of the questions in the Base Line instrument was as follows:

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df: the degrees of freedom in the chi-square computation. This number differs from item to item because there were sometimes so few choices made of one or more of the six possible responses that computing the chi-square statistic using the original distribution of choices would not have yielded accurate estimates of probabilities. For the reader not interested in the computational procedure, the "df" figure can be taken as the number of alternatives (of six) over which the bulk of the choices was distributed at pretest or posttest or both.

p: the probability that as much change as occurred (or more) would have occurred merely by chance, as computed by the chi-square technique. The rare cases of a respondent skipping an item or giving an indecipherable response were omitted from the computation.

d: the direction of change of the median response from pretest to posttest, the plus sign indicating the favorable direction (see text).

5. How about recent changes that could have useful effects on your school? Have there been any innovations, any new ways of doing things, that began during the last year or two that you think have helpful effects in the school? If so, please describe each very briefly below. If none, write "none."

Table 6-3 shows the responses of the Highland Park staff in December of 1967 (column 1) and in May of 1968 (column 6), along with the responses of teachers at the other four junior high schools in January of 1968 (columns 2, 3, 4, 5).

The first four lines of table 6-3 tell us that these five schools had shown a considerable amount of innovation of the sort of activities that can most usually be "packaged"—for which there is some tangible set of materials or instructions that goes along with the innovation such as teaching materials, specifications for a new job, TV equipment, or instructions for a bookkeeping method. Moreover, innovations under these headings can usually be put into effect by training individuals; it is not often necessary to establish delicate new role relations or new modes of group problem-solving for innovations like these to be instituted — though this is not to speak of their permanence.

Educational innovations of this sort depend primarily on new behaviors from a teacher within a classroom, a person placed in a new job, a person assigned the management of new equipment, or the person carrying out a quality-control operation; they do not depend heavily on the actions of a coordinated team. Mentions of these "packaged" innovations occurred frequently in the schools of Golden and Valley but less so in Highland Park. Mentions of curricular innovations appeared most heavily in the responses from Valley Junior High School No. 1, of new jobs and duties in both of the Valley schools, and of innovative uses of equipment in Golden School No. 1. The lonely mentions of program evaluation occurred in Golden No. 2 and Valley No. 1.

The Highland Park staff, compared to the other four school faculties, mentioned new arrangements for interpersonal processes more frequently and the "packagable" innovations less frequently. Although the total number of responses in lines 5 through 11 is generally low by comparison with the first four lines, mentions from Highland Park were more frequent there than mentions from any of the other four junior high schools. The categories of response here included relations between teachers and students, sharing power among the faculty, communication both vaguely and specifically described, new training of any kind, and new attitudes without mention of accompanying actions in organizational

TABLE 6-3

Numbers of teachers mentioning indicated kinds of innovations in response to item in Base Line questionnaire in Highland Park versus Golden and Valley.

Type of innovation mentioned	*Hi'nd Park* (1)	*Golden* No. 1 (2)	*Golden* No. 2 (3)	*Valley* No. 1 (4)	*Valley* No. 2 (5)	*Hi'nd Park* (6)
1. Curriculum	11	13	7	18	6	10
2. New jobs or duties established, including team teaching	4	4	1	14	12	4
3. Equipment, TV, audio-visual, maintenance	3	8	2	3	4	1
4. Program evaluation, quality control	0	0	1	1	0	0
5. Interpersonal relations between teachers and pupils or among pupils	2	0	0	0	0	1
6. New sharing of power or influence among more people	2	0	1	0	0	0
7. Org'l structure vaguely; no mention of specific form	1	0	0	0	0	2
8. New communication modes, kind or topic unspecified	1	0	0	0	0	4
9. New communication of a specified kind or topic	1	0	1	0	1	4
10. New training for personnel	1	0	0	0	0	2
11. New attitudes; unspecified actions or plans for action	1	0	0	0	0	6
12. New methods of solving problems or making decisions	12	1	0	0	0	7
13. Org'l structure; specified new channels, committees, liaison groups	9	0	1	0	1	10
14. Nonspecific and vague improvements	6	0	0	7	0	6

Column notes: (1) Responses from 46 respondents at Highland Park in Dec. '67.
(2) 30 respondents at School No. 1 in Golden in Jan. 1968.
(3) 30 respondents at School No. 2 in Golden in Jan. 1968.
(4) 34 respondents at School No. 1 in Valley in Jan. 1968.
(5) 44 respondents at School No. 2 in Valley in Jan. 1968.
(6) 39 respondents at Highland Park in May, 1968.

arrangements. The kind of innovations listed in lines 5 through 11 are activities that can be instrumental in achieving new forms of organization and new methods of solving organizational problems; lines 12 and 13, however, tally directly the mentions of new organizational forms achieved and new methods of solving problems.

Mentions from Highland Park of new methods of solving problems or making decisions (line 12) were twelve in December and seven in May, but there was only one mention from the other four schools combined. Line 13 tallies the mentions of new organizational structure such as committees, channels, and conference groups; here also the mentions from Highland Park are more numerous than the mentions from any of the other four schools. These results are especially important because the activities represented in lines 12 and 13 are closer than those of any of the other categories to the primary goals of the organizational training at Highland Park. The second hypothesis predicted more widespread participation in meetings and hypothesis 4 predicted new forms of organization. While no specific hypothesis was enunciated about problem solving (line 12), improved problem-solving was an intermediate process explicit in our theory and an immediate goal of the training itself. No line of the table contradicts any of the hypotheses.

We did not compute a test of statistical significance for any part of table 6-3. It seemed to us that any test appropriate from the statistical point of view would be quite inappropriate to the actual imprecision of the data. The important pattern in the table is not the disproportion in any single line, but rather the types of categories toward which the Highland Park people seem to have directed their attention in greater proportions than did the teachers in the comparison schools.*

READINESS TO COMMUNICATE ABOUT INTERPERSONAL RELATIONS

A set of questions was asked on the Base Line instrument (Appendix G) that provides a test of hypothesis 3 and helps us to understand the improvements in communication and interpersonal relations that were made at Highland Park. Some items asked for teachers' estimates of how their colleagues would react to certain kinds of interpersonal situations. Other questions asked the respondents to indicate their approval or disapproval of a variety of interpersonal behaviors. The distribution of responses, as we see below, supports our theory about methods that people in school organizations must utilize if they want to change the ways they do things together.

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* Appendix L contains further technical information about the data tabulated in table 6-3.

The theory states that it is necessary to increase readiness for communication about interpersonal processes before meaningful and stable organizational changes will be initiated by staff members. If this theory is correct and if we did produce changes in organizational structures, then we should be able to measure some changes in readiness for communication in the Highland Park staff. This sort of evidence will not tell us about the casual direction, but it will tell us about concommitance.

Before turning to the outcomes of the items themselves, it will be helpful to point out the relations of the times of measurement to the times of training. The Base Line instrument was administered at Highland Park in December of 1967 and in May of 1968. By December we should expect some effects of earlier training to be evident. The first training had taken place in late August. Most of the faculty were interviewed in early November in preparation for the second training event in early December. The Base Line questionnaires were distributed just after the December training event and most were returned by mail before the Christmas holidays. We should predict detectable changes by December; and the new levels should at least be maintained, if not increased, in May.

But we had not administered the Base Line instrument before the first training in August; the opportunity to work in Highland Park came too late for that. Consequently, the nature of interpersonal perceptions at Highland Park in December and May needed some other comparison. Fortunately, we were able to administer the same items in Golden and Valley in January.

Presumably, any effects normally taking place between the opening of school and December or January—effects on interpersonal relations—would have occurred with equal likelihood in Highland Park, Golden, and Valley, leaving our intervention as the most reasonable cause of any differences. Of course, it is true that we must also assume, in making use of this comparison, that the schools began the year at about the same level, since we administered pretests at none of them. We had some reassurance on this point, since we saw that levels on the questionnaires about the principal and about staff meetings were about the same at the beginning of the year between Highland Park and some other arbitrarily selected schools. Further, we know that no workshops with a focus on organizational development were conducted at any of the four junior high schools in Golden and Valley during the relevant period.

In brief, we feel justified in taking these circumstances as an approximation to a design in which the experimental school underwent two spaced posttests and the control schools underwent one posttest at about the same time as the experimental school's first posttest. Accordingly, as a

typical outcome, we should expect the response at Highland Park in December to be more favorable than the responses in Golden and Valley in January; and the response at Highland Park in May, if the earlier change did not wane, should be at least as favorable as in December.

One question asked was the following:

> 6. Suppose Teacher X strongly disagrees with something B says at a staff meeting. In Teacher X's place would most of the teachers you know in your school seek out B to discuss the disagreement?

The responses to item 6 were distributed as follows:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	14	19	22%	
Maybe about half would	37	57	50%	
No, most would *not*	49	24	28%	
	100	100	100%	of those with opinions
Don't know	20	20	8%	of total N
No answer	7	0	0%	of total N
Total respondents (N)	138	46	39	

The table above is read as follows: Among those respondents choosing one of the three opinions (that is, omitting people who chose "I don't know" or skipped the item), 14 per cent in Golden-Valley chose the answer, "Yes, I think most would" seek out B to discuss the disagreement. Thirty-seven per cent in Golden-Valley said that "maybe about half would," and 49 per cent answered, "No, most would *not*." These answers accounted for 73 per cent of the total of 138 respondents. Of the remainder, 20 per cent chose the answer, "I don't know" and 7 per cent skipped the item.

In item 6, we take "yes" as the favorable direction of answer. Our theory states that resources in the faculty can best be used if members believe that many others would usually take active steps to clear up disagreements—that a norm exists in this regard. We wanted our training to produce more of the first two answers listed above than would be found in the average school organization. Clearly, these answers in Highland Park in December far exceeded the proportion in Golden and Valley in January (that is, 19 + 57 = 76 in Highland Park versus

14 + 37 = 51 in Golden-Valley). In May, the proportion in Highland Park remained much higher than Golden-Valley, though it had fallen a few points since December. The decline in Highland Park between December and May was not statistically significant, but the difference between Highland Park and Golden-Valley was significant at the .05 level.* Consequently, the responses to this item give as much support as data from this research design can give to the conclusion that a larger proportion of staff in Highland Park perceived a norm about discussing disagreements than in Golden and Valley.

Another item in the Base Line questionnaire was:

> 7. Suppose Teacher X strongly disagrees with something B says at a staff meeting. In Teacher X's place, would most of the teachers you know in your school keep it to themselves and say nothing about it?

and the distribution of responses was:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	10	3	14%	
Maybe about half would	56	40	44%	
No, most would *not*	34	57	42%	
	100	100	100%	of those with opinions
Don't know and omitted	24	24	8%	of total N
N	138	46	39	

Considering only the responses showing opinions—the first three—the differences among schools were not statistically significant for item 7. The distribution of opinions on this item does not support our prediction.

Next is an item that yielded a perplexing result:

> 17. Suppose Teacher X feels hurt and put down by something another teacher has said to him. In Teacher's X place, would most of the teachers you know in your school be likely to avoid the other teacher?

The percentages of response are as follows:

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* In this section, we prefer a chance probability of .05 as the level of statistical significance—that is, as the point of decision. However, we report probabilities as high as .10 to round out the picture, notwithstanding the pains we may give purists in the field of probabilistic inference.

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	10	15	3%	
Maybe about half would	15	33	48%	
No, most would *not*	75	52	49%	
	100	100	100%	of those with opinions
Don't know and omitted	33	28	15%	of total N
N	138	46	39	

In May, half of the Highland Park faculty felt that most of their colleagues would *not* avoid another teacher who had said something hurtful, and almost 50 per cent thought that about half their colleagues would be likely to avoid the other teacher. In contrast, three quarters of the Golden-Valley faculties thought their colleagues would not avoid the teacher who had hurt them. The difference is statistically significant.

The Highland Park faculty were surely being more realistic than their counterparts in Golden and Valley. In our experience, avoiding a person who has hurt someone is easy to do. Nevertheless, this result ran contrary to our expectations and hopes.

In Highland Park, even though the percentage choosing an opinion rose from 72 per cent in December to 85 per cent in May, the proportion feeling about half their colleagues would avoid the teacher who had hurt them stayed very near one-half. But those who thought *most* would avoid the other declined while those who thought *about half* would avoid the other increased. Though these latter changes were not significant in themselves ($p. < .07$), the result was that Highland Park in May differed significantly from Golden-Valley in January. These results do not support hypothesis 3.

An item that lent support to our hypothesis was the following:

18. Suppose Teacher X feels hurt and put down by something another teacher has said to him. In Teacher X's place, would most of the teachers you know in your school be likely to tell the other teacher they felt hurt and put down?

The percentages of response were as follows:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	3	21	3%	
Maybe about half would	22	46	69%	
No, most would *not*	75	33	28%	
	100	100	100%	of those with opinions
Don't know and omitted	44	28	18%	of total N
N	138	46	39	

It can be seen at a glance that the portion of the Highland Park faculty who felt that their colleagues would face the other teacher with their hurt was much greater than the portions in Golden and Valley; the difference was statistically significant.*

Even though the proportion in Highland Park believing about half or more of their colleagues (those choosing the first two answers) would tell the other teacher they felt hurt increased from 67 per cent to 72 per cent, the proportion of the faculty giving the moderate answer "maybe about half would" increased sharply between December and May; the distributions in December and May were significantly different. Nevertheless, since "about half" may be the realistic answer and since the two favorable answers taken in combination did not decline (67 per cent to 72 per cent), we interpret the data from item 18 as supporting hypothesis 3.

The next item gives no help one way or the other.

19. Suppose Teacher X feels hurt and put down by something another teacher says to him. In Teacher X's place would most of the teachers you know in your school be likely to tell their friends that the other teacher is hard to get along with?

Answers were:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	16	3	10%	
Maybe about half would	38	37	52%	
No, most would *not*	46	60	38%	
	100	100	100%	of those with opinions
Don't know and omitted	37	35	20%	of total N
N	138	46	39	

None of the differences between schools or times is significant; the results give no support for hypothesis 3.

Having examined the items showing the estimates by respondents of

* It may be well, in comparing this item with item 17, to keep in mind that it would not be illogical for a teacher to say that maybe about half of his colleagues would avoid the other teacher and about half his colleagues would tell the other teacher they felt hurt and put down. It would not even be illogical for a teacher to say that *most* of his colleagues would avoid the other teacher; at the same time, *most* of his colleagues would tell the other teacher they felt hurt and put down, since a person responding in this manner could mean that most would avoid the other teacher upon many occasions, but when encountering the other teacher in appropriate circumstances would tell the other teacher they felt hurt and put down.

the extent of interpersonal norms in the school, we now turn to two items showing some readiness of the respondents to apply sanctions to certain interpersonal behaviors. These items also bear upon hypothesis 3.

20. Suppose you are in a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school; Teacher X quickly suggests that the committee get back to the topic and keep the discussion objective and impersonal. How would you feel toward X?

The responses to this item were as follows:

	G Jan.	*V* Jan.	*HP* Dec.	*HP* May
Approve strongly	71	41	29	28%
Approve mildly or some	15	32	32	34%
Wouldn't care	6	14	14	10%
Disapprove mildly or some	6	10	14	18%
Disapprove strongly	2	3	11	10%
	100	100	100	100%

The answers to item 20 among the four junior high schools in Golden and Valley were not homogeneous. Consequently, in the tabulation above, we have grouped the responses into two homogeneous groups: (1) the two schools in Golden and (2) the two schools in Valley. The differences are significant between the schools in Golden and Highland Park in May, with a smaller proportion among the Highland Park staff approving this restricting sort of behavior. The Highland Park staff did not change significantly on this item from December to May.

In brief, we find differences among our comparison schools in the case of this item, and the Highland Park staff sides in with the Valley faculty in allowing a wider range of discussion in the committee meeting. In actual numbers, the Highland Park people outdid the Valley people. This item clearly supports hypothesis 3.

A question paired with item 20 was:

21. Suppose you are on a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school; Teacher X listens to them and tells them his own feelings. How would you feel toward X?

The schools in Golden and Valley were not significantly different in responding to this item, but taken together they were very different from the Highland Park School in May. The distributions were as follows:

	G-V Jan.	*HP* Dec.	*HP* May
Approve strongly	5	27	29%
Approve mildly or some	23	21	21%
Wouldn't care	21	29	34%
Disapprove mildly or some	31	16	11%
Disapprove strongly	20	7	5%
	100	100	100%

Here we see that 50 per cent of the Highland Park faculty in May would approve mildly, some, or strongly of discussing personal feelings in the committee meeting compared with only 28 per cent in Golden and Valley. Conversely, only 16 per cent of the Highland Park people would disapprove mildly, some, or strongly while 51 per cent of the Golden-Valley people would disapprove mildly, some, or strongly. There was no significant difference in the distribution of responses among the Highland Park people between December and May.

We find the patterns of response to item 21 encouraging, since we tried to train the Highland Park people to deal with problems whether they were unsettling or not. The data of this item, too, support hypothesis 3.

Recapitulation. The distribution of opinions in items 6, 20, and 21 gives unequivocal support to hypothesis 3 concerning increased communication about interpersonal relations. With a small proviso, item 18 does so also. Items 7 and 19 gave nonsignificant results. Item 17 gave strange results, but we must count it as running against our prediction. In sum, we have support from four items, a lack of support (but no contradiction) from two, and a contradiction from one.

PROPORTIONS HAVING OPINIONS ABOUT INTERPERSONAL RELATIONS

We have discussed the percentages of teachers choosing answers that indicated one opinion or another when asked various questions about interpersonal norms in the school. However, some teachers chose "I don't know" and others did not answer some questions. In connection with each item that asked the respondent to estimate the proportion of other teachers who might make some specified response to a hypothetical situation, we examined the percentages of teachers who declined to indicate an opinion—that is, the percentage resulting from pooling both those answering "I don't know" and those failing to indicate an answer.

We were encouraged to pool these two modes of response by the frequent comments written in the margin by respondents who questioned, "How should I know what other teachers will do?"

Looking back at the tabulation for item 6 (asking what portion of teachers would seek out another with whom they had come to a disagreement), we see that the percentage of respondents who felt themselves unable to cope with the item for one reason or another (that is, those checking "I don't know" or skipping the item) amounted to 27 per cent of the residents in Golden and Valley, while these categories accounted for only 8 per cent of the Highland Park staff in May. This difference approaches significance, reaching the .06 level. We might infer that a larger proportion of the Highland Park staff felt able to estimate the behavior of their colleagues than was the case in Golden and Valley.

The fact that readiness for this sort of communication was growing during the year in Highland Park is supported when we compare the percentage of staff members who felt unable to choose one of the first three answers in December with the percentage of those who felt unable in May. The percentage unwilling to choose an answer declined from 20 per cent in December to 8 per cent in May. This difference also approaches significance, reaching the .07 level.

We emphasize the following: first, in December the portion of teachers having an opinion about the norms (concerning seeking out another teacher to try to resolve the disagreement) was already greater in Highland Park (80 per cent) than in the comparison schools of Golden and Valley (73 per cent); second, the percentage in Highland Park continued to increase; and by May it had reached 92 per cent. We interpret this to mean not only (in respect to this item) that Highland Park differed from the comparison schools in the direction our training was designed to encourage, but changes presumably set in motion in the summer and fall continued to occur between December and May. (In the case of this item, it is true, the reader may not be willing to accept the significance levels.)

Unfortunately, we have no figures on the testing effects. One explanation of the decrease in "don't knows" and "omits" could be that asking the question the first time helped respondents to arrive at an opinion by the time the second questioning occurred. An argument against this alternative explanation, however, is that we had already alerted the Highland Park staff to these matters and had urged them to put their thoughts into words. Surely the training in August, the interviewing in the autumn months, and the training in December would have much more influence on opinion formation than the questionnaire answered after the December training. But we have no data, it is true, to support this argument.

Still another hypothesis is that the Highland Park people were careful in December to express opinions only when they had strong evidence for their views, but were less careful in May. If this were the case, our training would have failed, since an important part of it involved methods of obtaining information about colleagues to use in place of unsupported guesses. The argument against this explanation is that if our training had failed, the behavior at Highland Park in May should have been like that at Golden-Valley where no training was given. But the percentages of uncertain answers (skipping and "don't know") in Highland Park were more like Golden and Valley in *December* than they were in May in the case of every item except item 28—as we shall see later.

No doubt both of these alternative explanations fit some answers given by some respondents. However, for the bulk of the responses, we prefer the explanation that expectations and therefore norms were becoming firmer.

Looking at the tabulation for item 7, we note again that the percentage of uncertain answers in Highland Park significantly dwindled from December to May—from 24 per cent to 8 per cent. And the 8 per cent in May was significantly smaller than the 24 per cent in Golden-Valley in January.

Item 17 asked about the portion of teachers who, feeling "put down" by another teacher, would avoid him. Here again, the percentage in Highland Park unwilling or unable to express an opinion decreased from 28 in December to 15 in May ($p<.06$) and the 15 per cent in May was smaller ($p.<.07$) than the 33 per cent in Golden-Valley in January.

Item 18 asked for the portion of teachers who would tell the other that they felt hurt and put down. In this case, the decline in uncertain answers in Highland Park from 28 per cent to 18 per cent is not statistically significant; but the difference between the 44 per cent in Golden-Valley in January is significantly different from Highland Park in May.

In the case of item 19 the pattern continues, though the decline of uncertain answers in Highland Park from 35 per cent to 20 per cent is not statistically significant ($p<.07$), nor is the difference between the 37 per cent in Golden-Valley in January and the 20 per cent in the Highland Park School in May ($p<.10$).

Conclusions: In all, the opinions chosen by respondents in answering the items on interpersonal relations lend some support to hypothesis 3 concerning increased communication about interpersonal relations. And the

patterns of proportions of skipped items and "don't know" responses can be interpreted as evidence that the training succeeded in its efforts to clarify roles in the school—that is, to the extent of increasing the number of teachers who could express their expectations about other teachers' behaviors as described by these items. On items 7 and 18 the Highland Park staff gave significantly fewer ($p<.05$) "don't know" and skipping responses than did teachers in the other four junior high schools. They also gave fewer of these "uncertain" responses to the other three items ($<p.06$, $<.07$, and $<.10$). Further, the staff reduced its percentage of uncertain answers between December and May in the case of all five items; one reached the customary level of significance ($p<.05$), one reached .06, two .07, and one gave clearly nonsignificant change.

READINESS FOR WIDER PARTICIPATION AND INTERDEPENDENCE

Other items in the Base Line questionnaire give evidence for the existence of processes leading to wider participation in group work (hypothesis 2), more widespread initiation of influence among the staff (hypothesis 2), more productive working relations between roles (hypothesis 5), and a general increase in the use of resources residing in the faculty. When teachers call upon the resources of others to aid their teaching, the activity supports hypothesis 7. Since one of our strong thrusts during the training at Highland Park was the use of resources residing in the faculty, we were especially interested in the outcome of the following items.

One of the items pertinent to hypotheses 2 and 5 was:

> 22. Suppose Teacher X develops a particularly useful and effective method for teaching something. In Teacher X's place, would most of the teachers you know in your school describe it briefly at a faculty meeting and offer to meet with others who wanted to hear more about it?

The distribution of answers was as follows:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	26	49	19%	
Maybe about half would	23	18	45%	
No, most would *not*	51	33	36%	
	100	100	100%	of those with opinions
Don't know and omitted	22	15	8%	of total N
N	138	46	39	

In May in Highland Park only 36 per cent believed most of their colleagues would *not* describe a useful idea at a faculty meeting and invite further discussion, while 51 per cent of the Golden-Valley faculties chose this response. Presumably, more of the Highland Park staff felt many of their colleagues would feel free to speak out about a useful method of teaching something if they developed one. We take this as a favorable outcome. However, the responses to this item show that a smaller proportion in Highland Park, compared to Golden-Valley, felt that *most* others would feel free to speak out. (The difference between the two distributions is statistically significant.) Were the Highland Park teachers becoming more realistic? (The change from December to May is significant, also.) Was more of this kind of discussion at Highland Park taking place in smaller groups than "faculty meetings"? Some evidence existed that this could have been occurring. Or were the Highland Park teachers, indeed, voicing fewer of their ideas in faculty meetings in the spring than they had in the fall? The responses to this item seem difficult to interpret. Perhaps we should tally this item as providing support for hypothesis 2 but as damaging to our prediction that an increase in the incidence of influence-attempts by teachers would hold up through May.

Another member of this family of items was:

23. Suppose Teacher X develops a particularly useful and effective method for teaching something. In Teacher X's place, would most of the teachers you know in your school say nothing about it unless somebody asked them, then maybe say a little about it?

The distribution for this item was:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	37	18	26%	
Maybe about half would	40	35	40%	
No, most would *not*	23	47	34%	
	100	100	100%	of those with opinions
Don't know and omitted	25	26	10%	of total N
N	138	46	39	

The distributions of opinions on the item above were not significantly different among the five schools. The member of this family of items that demonstrated significant differences and clearly favorable trends was this one:

24. Suppose Teacher X develops a particularly useful and effective method for teaching something. In Teacher X's place, would most

of the teachers you know in your school try to get administration backing for a project to get other teachers to try to use the method?

Here is the distribution of answers:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	6	16	9%	
Maybe about half would	31	29	41%	
No, most would *not*	63	55	50%	
	100	100	100%	of those with opinions
Don't know and omitted	32	32	18%	of total N
N	138	46	39	

While 63 per cent of the Golden-Valley teachers choosing one of the first three answers said that most of their colleagues would *not* seek administration backing for their ideas, only 50 per cent of the Highland Park teachers said this in May. Furthermore, this percentage at Highland Park was a decrease from the 55 per cent in December.

Conversely, the percentage estimating that about half their colleagues would try to get administrative backing for a good idea was higher in Highland Park in May than in Golden-Valley. Finally, the percentage in May of those believing in Highland Park that *most* of their colleagues would do this remained higher than in Golden-Valley, though the percentage in Highland Park had dropped, it is true, from sixteen to nine. On balance, this item seems to support hypothesis 2.

Another item bearing upon hypotheses 2 and 5 is this one:

27. Suppose Teacher X wants to improve his classroom effectiveness. In Teacher X's place, would most of the teachers you know in your building ask another teacher to observe his teaching and then have a conference afterward?

The answers to this item were as follows:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	4	14	6%	
Maybe about half would	11	36	26%	
No, most would *not*	85	50	68%	
	100	100	100%	of those with opinions
Don't know and omitted	31	22	13%	of total N
N	138	46	39	

A significantly larger proportion of teachers in Highland Park be-

lieved that a colleague would ask another to observe his teaching than was the case in Golden and Valley, though the disparity became less pronounced between December and May. The difference between Highland Park in May and Golden-Valley in January is according to prediction, but the decline in Highland Park from December to May ($p<.04$) is not.

The change in proportions of choice among the first three answers to item 27 in Highland Park between December and May is difficult to interpret. It may be that the particular kind of help teachers sought from one another changed during the period so that a decline in this kind of help merely mirrored an increase in some other kind of help. On the other hand, there may actually have been some rebuffs when teachers made this kind of request to others during this period. Finally, these figures may reflect a more realistic orientation. Perhaps we should tally this item as providing support for hypothesis 5, but as damaging our prediction that the trend to a new level of use of human resources would hold up through May.

We have a more favorable picture from an item similar to item 27, namely, item 28:

> 28. Suppose Teacher X wants to improve his classroom effectiveness. In Teacher X's place, would most of the teachers you know in your building ask other teachers to let him (Teacher X) observe how the other teachers teach, to get ideas how to improve their own?

The distributions of responses were as follows to item 28:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	9	24	10%	
Maybe about half would	31	41	60%	
No, most would *not*	60	35	30%	
	100	100	100%	of those with opinions
Don't know and omitted	28	19	23%	of total N
N	138	46	39	

The difference between Golden-Valley and Highland Park in May was statistically significant; the percentage of teachers believing that most of their colleagues would *not* ask this kind of help was only half in Highland Park what it was among the teachers in Golden and Valley. The portion of Highland Park thinking that half or most of their colleagues would ask this kind of help was 70 per cent as compared to 40 per cent in Golden and Valley. The change in the Highland Park staff between December and May approached significance ($p<.06$) with some teachers

apparently relinquishing the answer, "No, most would not," and also the answer, "Yes, I think most would" and moving into the more moderate answer, "Maybe about half would." We interpret the responses to this item as supporting hypothesis 5.

A third member of this family of items was as follows:

29. Suppose Teacher X wants to improve his classroom effectiveness. In Teacher X's place, would most of the teachers you know in your building have a free and open discussion with his students about his teaching?

The answers were as follows:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	3	8	9%	
Maybe about half would	22	22	23%	
No, most would *not*	75	70	68%	
	100	100	100%	of those with opinions
Don't know and omitted	33	22	13%	of total N
N	138	46	39	

The percentages in the table above are not significantly different. A final member of this family was:

30. Suppose Teacher X wants to improve his classroom effectiveness. In Teacher X's place, would most of the teachers you know in your building ask the principal to observe his teaching and then have a conference afterward?

The distribution of answers to this item was as follows:

	G-V Jan.	*HP* Dec.	*HP* May	
Yes, I think most would	9	26	6%	
Maybe about half would	38	57	63%	
No, most would *not*	53	17	31%	
	100	100	100%	of those with opinions
Don't know and omitted	31	24	18%	of total N
N	138	46	39	

We see that a much larger proportion of teachers in Highland Park in May believed that about half of their colleagues would ask their principal for this kind of help than was the case among the teachers in Golden and Valley, while a much smaller proportion of Highland Park teachers in May felt that most of their colleagues would *not do this*. The differences

among Highland Park teachers between December and May were not significant. We believe this item gives good support to hypothesis 5. These data about Highland Park are consonant, too, with the data from the questionnaire about the principal.

An item of a different sort but also relevant to hypotheses 1 and 5 was:

33. Suppose Teacher X develops a particularly useful and effective method for teaching something. If X were to describe the method briefly at a faculty meeting and offer to meet further with any who wanted to know more, how would you feel about it?

The readiness to give approval or disapproval to this kind of sharing of ideas did not differ significantly among the schools, as can be seen on the following table:

	G-V Jan.	*HP* Dec.	*HP* May
Approve strongly	64	80	71%
Approve mildly or some	25	18	22%
Wouldn't care	9	2	3%
Disapprove mildly or some	1	0	2%
Disapprove strongly	1	0	2%
	100	100	100%

We now turn to another form of the item about asking another teacher to observe one's teaching and examine the readiness to give sanctions. The item now reads:

25. Suppose X wants to improve his classroom effectiveness. If X asked another teacher to observe his teaching and then have a conference about it afterward, how would you feel toward X?

	G-V Jan.	*HP* Dec.	*HP* May
Approve strongly	52	67	80%
Approve mildly or some	27	13	10%
Wouldn't care	21	20	10%
Disapprove mildly or some	0	0	0%
Disapprove strongly	0	0	0%
	100	100	100%

Clearly, Highland Park teachers were more often ready to give approval to this kind of behavior ($p<.011$), both in December and May, than were the teachers in Golden and Valley; we take this outcome to indicate once again the improved readiness of the Highland Park teachers to

make use of each other as resources, supporting especially hypotheses 1 and 5. A similar pattern is seen in the following item:

26. Suppose Teacher X wants to improve his classroom effectiveness. If X asked another teacher to let him (X) observe the other teacher teach, how would you feel toward X?

The distribution of answers was as follows:

	G-V Jan.	*HP* Dec.	*HP* May
Approve strongly	51	67	74%
Approve mildly or some	26	11	13%
Wouldn't care	20	20	10%
Disapprove mildly or some	2	0	3%
Disapprove strongly	1	2	0%
	100	100	100%

Again the differences between Highland Park and Golden-Valley are statistically significant and in the favorable direction.

Another item having to do with relations with the principal is this one:

31. Suppose Teacher X disagrees with a procedure that the principal has outlined for all to follow. If Teacher X were to go and talk with the principal about his disagreement, how would you feel about it?

There were no significant differences in the distributions of answers to this item. The distributions are given below with Valley Junior High School No. 2 separated from the rest because the four schools were not homogeneous in regard to item 31.

	G and V-1 Jan.	*V-2* Jan.	*HP* Dec.	*HP* May
Approve strongly	76	50	71	69%
Approve mildly or some	12	21	13	13%
Wouldn't care	11	17	13	18%
Disapprove mildly or some	1	12	3	0%
Disapprove strongly	0	0	0	0%
	100	100	100	100%

The following item concerning relations with the principal gave significant differences between Highland Park and Valley Junior High School No. 2.

32. Suppose Teacher X disagrees with a procedure that the principal has outlined for all to follow. If X were to say nothing but ignore the principal's directive, how would you feel about it?

The distribution of responses was as follows:

	G and V-1 Jan.	*V-2* Jan.	*HP* Dec.	*HP* May
Approve strongly	1	0	0	0%
Approve mildly or some	5	8	0	5%
Wouldn't care	11	24	11	10%
Disapprove mildly or some	30	43	28	34%
Disapprove strongly	53	25	61	51%
	100	100	100	100%

The teachers at Highland Park were, in general, more disapproving ($p<.05$) of the idea of ignoring the principal's directive than were the teachers in Valley Junior High No. 2. The other three schools among the comparison schools were not significantly different from Highland Park.

Recapitulation: Hypothesis 2 predicted that the faculty would increase its use of groups for joint actions of one kind or another and that members would, on the average, increase their initiations of communication for purposes of influence. We take the responses to the following items as supporting hypothesis 2.

Item 22 on describing a useful method of teaching at a faculty meeting
Item 24 on getting administrative backing for a useful method of teaching

Hypothesis 5 predicted the appearance of more productive relations between roles in the school. We take the responses to the following items as supporting hypothesis 5.

Item 27 on asking another teacher to observe one's teaching
Item 28 on asking to observe another teacher's teaching
Item 30 on asking the principal to observe one's teaching
Item 25 on approving a teacher who asked another to observe his teaching
Item 26 on approving a teacher (X) who asked another to let him (X) observe the other's teaching
Item 32 on ignoring the principal's directive

As well as supporting hypothesis 5, we take items 25 and 26 as giving some support to hypothesis 1 on establishing new paths of communication. Some support to hypothesis 7 concerning effects on classroom activities is given by items 22, 24, 25, 26, 27, 28, and 30.

The following items showed no significant differences between Highland Park and the other junior high schools:

Item 23 on saying nothing about a useful method of teaching
Item 29 on having a discussion with students about one's teaching

Item 33 on approving a teacher who described a useful method of teaching at a faculty meeting
Item 31 on talking to the principal about one's disagreement with a procedure

Items 22 and 21, while showing significant and favorable differences between Highland Park and the other schools, also showed significant and unfavorable decreases in effect at Highland Park between December and May.

In brief, four items gave insignificant results and eight gave significant and favorable results, though two of the eight showed significant diminutions of effect at the end of the year. Even in the case of the latter two items, however, the effects at Highland Park remained significantly more favorable than at the schools in Golden and Valley. All in all, the items dealing with wider participation and interdependence seem to give evidence that favorable changes did take place at Highland Park, compared to the other schools, and did in most instances maintain a superior level from December to May.

PROPORTIONS HAVING OPINIONS ABOUT PARTICIPATION

Considering the percentages of "don't know" answers and omissions, we found that the percentages at Golden and Valley were higher than in Highland Park in the case of every one of the seven items that offered "don't know" choices. The difference was statistically significant in the case of items 24, 27, 28, and 29 and nearly so in the case of items 22 ($p<.07$) and 23 ($p<10$). Further, the percentage of these "uncertain" answers *decreased* at Highland Park from December to May in the case of every item except one; the percentage uncertain about item 28 went (nonsignificantly) from 19 in December to 23 in May. The decrease was statistically significant in the case of item 23 and nearly so in the case of item 24 ($p<.06$). We conclude that teachers in Highland Park developed relatively clearer or firmer role expectations about participation and interdependence than did their counterparts at the other junior high schools and that there was some tendency for this clarity (or readiness to give an opinion) to increase during the remainder of the year at Highland Park.

Throwing together the items discussed in the last two sections—that is, the five items concerning interpersonal relations and the seven items concerning participation and interdependence—the results concerning readiness to express an opinion were especially impressive. Twelve items offered the respondent the choice of an "I don't know" response. In the case of *every one* of these twelve items, the percentage of "uncertain"

responses was greater in Golden and Valley than in Highland Park in May; the difference was significant beyond the .05 level in the case of six of these items (7, 18, 24, 27, 28, 29) and between the .10 and .05 levels in the case of five more (6, 17, 19, 22, 23). Further, in the case of *all but one* of these items, the readiness to express opinions increased at Highland Park as the year went on; the increase was significant beyond the .05 level in the case of three items (7, 23, 27) and between the .10 and .05 levels in the case of four (6, 17, 19, 24). Only one item (28) showed a decrease in readiness to express an opinion, and the decrease was nonsignificant.

We conclude that the training at Highland Park produced an enlarged perception of what the faculty expected of one another (at least in respect to those items). Further, not only was the new clarity of role perception relatively stable from December to May, but in the case of some items the pervasiveness of the clarity actually increased.

Summary

THE PRINCIPAL OF THIS SCHOOL

One questionnaire was designed to assess changes in the principal's efforts to improve the quality of the performance of his staff and the managerial and social support he gave them. By one analysis, teachers in Highland Park were found to have changed their estimation of their principal in a favorable direction (significantly) between August and May on eighteen of the twenty-four items; no item showed a significant negative change. In contrast, the school showing the most favorable changes among six junior high schools near New York City showed significantly favorable changes on nine of the items and significantly unfavorable changes on four. The school showing the most unfavorable changes showed significantly negative changes on twelve items and significant positive changes on none. These results strongly support hypothesis 5 concerning more productive relations between roles.

STAFF MEETINGS IN THIS SCHOOL

We used a questionnaire developed by COPED to assess feelings of openness and influence in meetings. Highland Park teachers were found to report significantly more openness and more feelings of having influence in May than they reported the previous August in the case of twenty-one items out of thirty seven, and they reported significantly unfavorable changes in the case of two items.

Three schools near New York City were compared with Highland Park. One of these showed both the most positive changes and the most negative; in this school, meetings were rated as changing significantly for the better on six items and for the worse on eight. These results provide strong evidence that our training in group process had important effects on the conduct of meetings or, at least, on participants' perceptions of the meetings. However, considering the nature of the items, it seems doubtful that perceptions of the meetings could have changed in all these respects without some changes of the indicated sort in the meetings themselves. Finally, these results also offer some support for hypotheses 2, 3, and 5.

INNOVATIONS

When we asked what new ways of doing things had occurred during the last year or two that could have helpful effects in the school, the Highland Park staff mentioned new arrangements for interpersonal processes more frequently and "packageable" innovations (such as curricular changes) less frequently than faculties in four junior high schools near Seattle. Especially relevant to the nature of the training carried out at Highland Park was the fact that there were twelve mentions of new methods of solving problems or making decisions in groups at Highland Park in December and seven in May, but only one throughout the other four schools. The mentions of new organizational structures at Highland Park also exceeded mentions at the other schools by nine and ten to two.

READINESS TO COMMUNICATE

A series of seven items in the Base Line instrument queried respondents about their perceptions of colleagues' willingness to discuss disagreements and personal feelings. Four of these showed significantly more of this kind of communication among the Highland Park staff than among the faculties at the four junior high schools near Seattle; the other three showed insignificant or confused differences. Using a chance probability of .05 as the level of significance, four out of seven significant items is good support for a prediction.

Five of these items offered a choice of "I don't know." On two of these items the Highland Park staff gave significantly fewer ($p<.05$) "don't know" and skipping responses than did the staffs of the other four junior high schools. They also gave fewer of these responses indicating uncertainty of opinion to the other three items, though with a little greater probability of the result being chance ($p<.06$, $p<.07$, and

<p.10). In addition, the Highland Park staff reduced its percentage of uncertain answers between December and May in the case of all five items; one item declined significantly at <.05, three nearly so at p<.06 and p<.07, and one was clearly nonsignificant in its decline. These findings support hypothesis 3 and imply more widespread clarity of expectation about the behavior of others in Highland Park.

READINESS FOR WIDER PARTICITATION

Another series of items in the Base Line questionnaire queried respondents about how good techniques of teaching possessed by one teacher could be made known to others, about how a teacher could get help from others to improve his own technique, and about teachers' relations with the principal. In comparing Highland Park with the four schools near Seattle, eight of these twelve items showed significant differences favorable to Highland Park. On two of these eight items, however, the effect in Highland Park diminished significantly during the year. Nevertheless, on all eight items, Highland Park showed significantly more use of groups for joint actions and more initiation of influence-attempts than did the other schools. This supports hypothesis 2.

Seven of these items offered a choice of "I don't know." Highland Park gave fewer responses betraying uncertainty of opinion than did the other schools in the case of every one of the items. The difference was significant (p<.05) in the case of four items and nearly so (p<.07 and p<.10) in the case of two more. Furthermore, uncertainty of response at Highland Park decreased between December and May in the case of every item except one. The decrease was statistically significant in the case of one item and nearly so (p<.06) in the case of another. Changes in other items were nonsignificant.

The patterns of the data presented in this chapter and in chapter 5 seem to us, in their overall trends and in their mutual enhancement of meaning, to give strong support to our original hypothesis and to the likelihood that the training did produce the immediate effects we intended.

Readers interested in the technical points of the study design will find further comment in Appendix M.

Given the evidence we have presented in this chapter and the last, we feel we can claim for the Highland Park project that the organizational training greatly helped bring about the pattern of outcomes visible in May, 1968. The best interpretation is that this kind of training can produce constructive outcomes in at least this type of school—whatever we may find, eventually, to be "this type" of school.

7

Future Work

IN this chapter we step beyond the specific training activities and their measured effects at Highland Park Junior High School to view these activities within broader frameworks. We take the view of the skilled organizational trainer seeking insights applicable to other school organizations. We raise two questions: What can the trainer learn from this project that he can use in other school settings? What can school staffs take from this project for their own development and improvement?

The Nature of the Training Activities

The training events were aimed at improving working relationships within a school building. The organizational form in terms of relationships between role occupants, not the persons in their complete individualities, was the basic focus of the intervention. This was, in other words, a training intervention pointed toward organizational development, not personal development.

At the same time, it is an inescapable truism that role occupants are persons and that trainees are persons. It is only an abstraction—a way social scientists think about things—that tries to make roles different from persons in living organization. Moreover, persons sometimes invest so much of their personal existence in a role (and this is perhaps especially true with educators) that strong emotional reactions enter into organizational change.

Organizational training, as we conceived it, aims at rearranging, strengthening, or in some way refurbishing the relationships between people in various positions in the organization; this type of training does not aim at changing individual personalities. Even new cognitive understandings, while important, are a minor part of the training. Changes within the individual that may occur are but incidental.

Strengths of the Summer Workshop

Even though the summer workshop was successful, reflection leads us to consider those aspects that were more or less effective. Aspects of the design for a training activity like this one can be divided most simply into *macroaspects* and *microaspects*. Macroaspects are a design's overall structure and outline, its sequence of parts, and the general forms through which the individual activities flow. Microaspects, on the other hand, refer to the specific activities played out during any limited period.

MACROASPECTS OF THE SUMMER WORKSHOP

Let us begin by describing what we believe to be the more successful macroaspects of the summer workshop, the features of the design we feel most confident in offering for use by other trainers.

Including all members of the school. Perhaps the most significant macroaspect was that virtually all staff members of Highland Park Junior High School were present from the beginning of the workshop. Everyone learned about the training goals at the same time and thus it was easy to transfer what was learned during the week to the school situation because staff members could remind one another of what had happened at the workshop. The importance of attendance was underscored later when the two staff members who could not be present posed significant barriers to the staff's further development.

Our view is that the training staff must give considerable attention to the trainees. When working with a school-building staff, everyone must get started together. Even a few days difference can create barriers between the trained and untrained.

The building staff, in most cases, has only three hierarchical levels: administrators, teachers, and nonprofessional personnel. In certain respects, this is actually two separate hierarchies of authority with the administrators and teachers comprising one unit and administrators and nonprofessional personnel the other. Thus all roles directly touch one another in the hierarchical sense.

The picture changes when training is carried out with an entire school system that has at least three distinct levels. Hierarchies in a district organization are more articulated than in the school building and the levels are more distant. In addition, the sheer number of people makes it easier for the onlooker to accept nonthreatening reasons why training is held with one faction of the system before others.

Another report will explore these issues in more detail; our point now is to stress the importance of involving all staff members when commencing organizational training with a school-building faculty.

Structured skill activities. The design called for a sequence of training events that started with games and structured skill activities and moved to solving real organizational problems. This sequence worked well in two ways. First, organization members—most of whom were attending the training event as a duty rather than by self-selection—could more easily find their way into the new interpersonal modes through structured skill exercises than through less structured experiences demanding more personal commitment. The skill exercises were chosen because each of them demonstrated, in microcosm, some organizational issues reminiscent of role relationships in the school. Examples include using resources of others in an organization, collaborating with others in problem solving, and involving others in decision making.

The structured exercises allowed staff members to become actively involved with little personal risk or anxiety. At the same time, the exercises were real enough to lead the discussions to the subject of organizational processes and relationships. Nearly every exercise culminated with small groups discussing the ways in which the experience was similar or different from what usually happens in the school. The exercises had such powerful effects in themselves that trainers seldom had to reorient the participants to the topic. The exercise brought the staff members to the realization that more work was needed to improve communications, to overcome difficulties in listening, and to gain skill in working together in groups.

The results of the exercises led rather naturally into back-home problem-solving. Staff members chose to work on increasing role clarity, using staff resources, and increasing staff participation at meetings. All of these were perceived as critical organizational problems. These appeared to us, too, as problems at Highland Park. Also, the structured exercises set the stage for the choice of problems of this kind. Unstructured activities probably would have led into work on relationships between certain

persons. Thus the exercises supported our goals of working at the organizational level.

Rotating subgroup membership. The design called for staff members to rotate through different groups during the first few days. This was done to increase the potential networks of workable relationships on the staff and to decrease the possibility of an ingroup, outgroup pattern emerging. Another goal of such rotating was to increase members' identification with the whole staff. We believed that some degree of group identification was necessary for the motivation to carry the project through the year. This practice of preventing groups from solidifying during the early training seems to have increased cohesiveness of the staff.

Equal treatment to all ranks. The design consciously attempted to reduce status differences among the staff. Rotating the staff through groups brought together teachers, administrators, and nonprofessional personnel. The exercises emphasized that persons within groups carry out tasks and that one attempts to do the best he can on a given task regardless of who happens to be in his group. Such an assumption brought staff members closer together psychologically—a prerequisite to achieving openness and better communication.

Exemplifying new organizational forms in the training. Another significant point about the design was that group processes, new group forms, and procedures for problem solving were introduced with the assumption that the use of such procedures by staff members would lead to new organizational structures. In other words, this training program involved learning about processes that would help in a search for new and improved structures. This approach contrasts to one in which a new structure is imposed in a school and then processes for coping with it are learned. Neither is necessarily superior, but they do differ significantly.

In our training design, new structures were expected to arise out of problem solving and we believe that the macroaspects of the design encouraged that to happen.

MICROASPECTS OF THE SUMMER WORKSHOP

Several microaspects of the design for the summer workshop warrant special attention because of their positive effects on the Highland Park staff.

The fishbowl. Various group formations of different training activities served as models that were used by staff members back home. The fish-

bowl arrangement turned out to be especially useful. This is the situation where one group would form on the inside of another. Usually the outside group observed the insiders, the observers having been provided by the trainers with particular observation categories to guide them.

A variation on this became particularly useful to the Highland Park staff. It was a fishbowl formation in which two or three empty chairs were left in the inside group and members of the outside group were invited to enter when they chose to communicate something to the insiders. In the summer workshop, this pattern was employed during the problem-solving phase. Later, in a followup session when the Principal's Advisory Committee met in front of the staff, the same group formation was used. We learned that the Highland Park staff spontaneously employed such a formation several times during the year to increase communication flow and participation between groups.

Figure 7-1 shows one possible formation for using the fishbowl technique with empty chairs. The members of a work group are shown here as "x's" within circles "o." Empty circles depict empty chairs. The "x's" on the outside of the near-circle represent the audience. (We have found it easier to observe the work group if they leave their circle somewhat open to the view of an audience.)

Some designs call for the audience to be divided into observing subgroups. For instance, in one followup session we divided the outsiders into those observing for task-centered processes, those for interpersonal processes, those for the forces that were helping and hindering the group from being productive, and finally, those observing how well group members were representing the views of others.

In another fishbowl arrangement, shown in figure 7-2, members of an outer group sit behind the same number of members of an inner group. Each observer in the outer group watches the person facing him across the inner circle (as indicated by the arrows in the diagram).

Various designs are possible, but one that is popular calls for the outsiders to observe insiders for perhaps fifteen minutes, after which five or ten minutes are reserved for feedback from the observer to the observed person. One way to do this, especially with an inexperienced group, is for each observed-observer pair to go where they can talk without being heard by the others. Then the person being observed explains an intention to his observer who is asked to see if the intention can be fulfilled during the next work period—which might last about thirty minutes. The observer watches the same person again, this time to see how he "comes across," especially regarding the stated intention. Another feedback

FIGURE 7-1
Fishbowl with chairs for outsiders

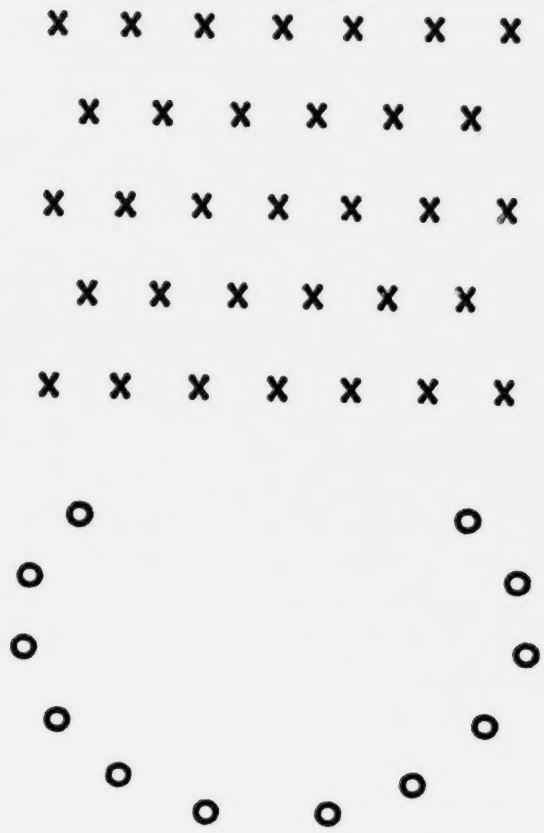
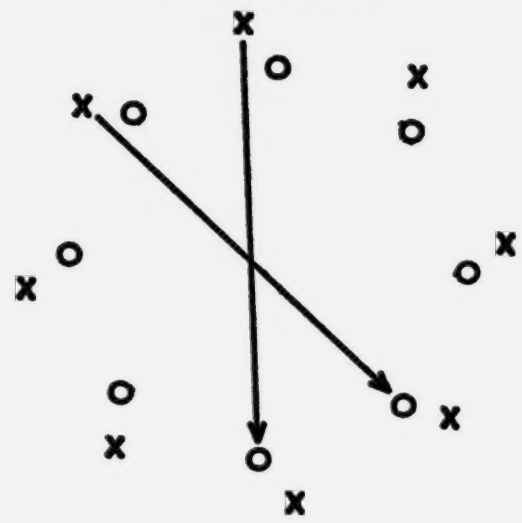


FIGURE 7-2
One-to-one fishbowl



period then takes place. Finally, the outsiders observe the whole group to see how the persons function together. This last period of group work by the insiders continues for about fifteen minutes, after which the outsiders enter the middle to review what they saw going on in the other group. While they do this the group that was previously on the inside sits around them on the outside. The entire process can be repeated with the group that was previously observing now forming the work group.

The basic idea of the fishbowl formation is that a group begins to become more self-conscious and willing to improve its working relationships as it is able to open its processes to others, especially fellow staff members who have some interest in what happens in the observed group. Even though this format often involves anxiety and a feeling of "being watched," the advantages seem to outweigh the disadvantages, at least after some trust and openness have been developed within a staff.

Two-way communication. Several training activities emphasized the importance of two-way communication. The impact of these interventions on the Highland Park staff was great, for they especially affected the area coordinator's role. They were encouraged by their colleagues to serve as communication links between the Principal's Advisory Committee and the area groups. This was an instance when learning about new processes became an impetus for bringing about structural change. This structural change was important and seemed to help the staff reduce communicative inadequacies across levels.

Systematic problem-solving. The step-by-step problem-solving process was another important microelement in the workshop design. We returned to this problem-solving process often. It became a useful device for Highland Park staff members who could easily keep in mind the steps which they made use of spontaneously during the school year.

Weaknesses of the Summer Workshop

Several aspects of the summer workshop could be improved.

First, we believe that at the end of the summer workshop we should have encouraged the Highland Park staff to commit themselves to more specific and concrete action steps to be used in specific problem-solving processes back home. In essence, the problem solving was learned as a process and well used later in the year, but more concrete actions could have come from the problem solving had staff members intended to follow through on the action steps they started at the workshop.

Perhaps we should have done what Schmuck did in a previous training

program. During the last two days of a teacher-development laboratory in which the participants were learning how to improve the group processes in their classrooms, the teachers made specific plans for implementing new classroom procedures during the school year. They had already been through a problem-solving process similar to the one used in this project, though with a few variations (Schmuck, Chesler, and Lippitt 1966).

In making plans for implementation back home, each teacher first estimated the restraining forces that would keep him from completing his plan. Next, after considerable thought about the plan, each teacher conferred with a staff trainer. This conference took the place of a final examination (academic credit was given for the training) and was tape recorded. A time was determined for playing the tape right after school had begun as a reminder and motivational device for supporting implementation of the plan.

Some variations of this procedure could have been used. We might have asked each problem-solving group to state its plans for continued work on clarifying roles, improving the uses of resources, or gaining more staff participation at meetings. Everyone could have received copies of statements or they might have been presented orally and collected on tape. If the tape were used, it could have been played back to the group in September and their attempts at solving the problem could have been reviewed at that time.

DEALING WITH ABSENT PERSONS

We have stated before that all but two staff members attended the summer workshop and that the pair were never really brought into the faculty, psychologically speaking, during the school year. One attempt was made by a CASEA trainer to include one of the noninvolved persons into the staff by conducting a discussion about the workshop with that person and three of her closest associates. At that meeting, events of the workshop were interpreted to her. However, little improvement resulted.

In retrospect, the CASEA trainers should have designed a session in which the problem of informing those who were not at the summer workshop was dealt with by the Highland Park staff. Perhaps it was not highly significant to the organization that these two professional persons be included. However, it is important to us that the Highland Park staff have the capability of recognizing the phenomenon of the separation of ingroup from outgroup and that they be able to take steps to reduce or alleviate such conflicts. These skills were not developed during the training events.

INFORMATION-GATHERING TECHNIQUES

The problem-solving sequence and procedure, as presented to the Highland Park staff, lacked attention to techniques for diagnosing organizational processes. It is true that we succeeded in training the staff members to find out about their organization by talking to one another openly and this, in itself, is no small achievement. Nevertheless, the training also might have included some diagnostic tools in the form of self-report questionnaires, brief but systematic interview schedules, and categories for observation that staff members could have used during the year to diagnose their own organization.

The Schmuck project mentioned earlier offers an example of developing diagnostic skills. In that project participants explored classroom diagnosis from several points of view. They learned to assess the classroom learning climate, measure classroom social relations, and use different measuring instruments to get a reading on the self-concepts of the youngsters. This became an integral part of the problem-solving process and made the teachers aware of new ways of diagnosing their classrooms.

Although many more diagnostic tools are available for classrooms than for school organizations, enough instruments applicable to organizations exist that the Highland Park staff could have received at least an introduction to the potentialities.

Strengths of the Training During the School Year

Five training activities stand out as crucial aspects of the training during the school year.

INTERVIEWS AFTER SUMMER TRAINING

The interviews carried out between the end of the summer workshop and the first followup session were highly beneficial both in bringing our trainers psychologically closer to the Highland Park staff and in giving us a number of key ideas for designing the training event of December 1 and 2.

Our approach to these interviews may be instructive. We interviewed staff members during the hour set aside for them to prepare for their teaching. We interviewed some in groups and others individually. We probed contradictory comments and throughout the interviewing we tried to build a relaxed and open climate.

We should point out, as have Miles and others (1967), that a distinction should be drawn between collecting clinical data to guide future training activities (as was our primary purpose in these interviews) and

collecting experimental or evaluative data to see if the training has been effective. A clinical data collection should increase rapport between the trainers and trainees as well as help the trainers in designing appropriate training events. Data for evaluating the project as an experiment, however, should be collected under highly controlled, objective circumstances. We also think that the trainers should not read results of the pretest evaluation data until after the posttest data have been collected. This prevents them from making unconscious attempts to influence trainees to fill out the posttest questionnaires the way the trainers might like them filled out.

To accomplish these two purposes, CASEA trainers, though actively involved in all data collection, did not scan or analyze questionnaire results until the end of the school year. The essays written for academic credit, of course, had to be read in the fall of the year and were used as clinical data.

THE FISHBOWL

The fishbowl technique was a useful format for the Highland Park staff. It especially took hold during the December 2 meeting when the staff observed the Principal's Advisory Committee at work.

PROBLEM SOLVING IN REAL GROUPS

Along with the fishbowl technique, we emphasized in the December 1 and 2 session the need for improvements in the functioning of the area groups. In this session we approximated real meetings of the area groups and asked them to carry out the problem-solving procedure within their meetings. The only unusual aspect was the fishbowl format. We believe that simulating a real group meeting was a significant and positive part of the training sessions during the school year. The simulations aided in transferring knowledge during the summer workshop—especially learning about problem solving—to new and better group procedures in the area groups during the school year. Careful attention to the problem of transfer of training was a major benefit of this project.

REVIEW OF PROGRESS

A significant contribution to the total design of the project occurred in February. At that time the Highland Park staff reviewed how far they had progressed toward solving the three problems they had chosen to work on at the summer workshop. This session had at least three helpful effects:

1. It reopened discussions and collaborative problem-solving that had just begun to emerge. Significant changes in openness occurred among the Highland Park staff and the February session contributed to that gain.
2. The session helped staff members recognize that they had already accomplished many positive things. This realization gave many of the Highland Park staff a boost, encouraging them to solve still more problems.
3. The session helped ease the departure of the CASEA staff. It put the power for change and implementation of the problem-solving process directly into the hands of subgroups of teachers. We think that this also supported continuing work on the problems raised earlier.

FINAL UNSTRUCTURED SESSIONS

Finally, a significant event in the total design was the unstructured session, in the manner of a T-group, held for a complete day in February with the Principal's Advisory Committee. Involvement of most was high and the results led to a strengthened group.

Weaknesses of the Training During the School Year

Three things may have had an adverse effect on some of the work during the school year.

DEMANDS ON PERSONAL ENERGY

Many teachers came to the sessions tired from a week of teaching. After such mental exhaustion it was difficult for some to get highly involved in these emotionally charged sessions. Indeed, it is surprising that as many were able to overcome fatigue as did. Even so, consideration should be given to arranging vacation times during the school year for organizational training.

CHANGING TRAINERS

Only two members of CASEA worked with the Highland Park staff during the 1967 summer workshop. For interviewing and training during the school year it was necessary to introduce several new persons to the school. At times Highland Park staff members were not sure who were on the CASEA staff. Our staff was so large for the sessions in December that we also had problems. Some of these intrastaff confusions prob-

ably sent diverse messages to the Highland Park staff. More attention should have been given to helping the school people learn about the various competencies, experiences, and roles of the CASEA staff.

CLARITY OF EXPECTATIONS AMONG TRAINERS

Along with our staffing difficulties, our training plans were often extensive and at points not sharply enough defined. This led to uneven performances, especially in subgroups when different trainers were involved. It is difficult for us to know what effects this had on the design. Undoubtedly there were some. Trainers should review their expectations before getting deeply involved in an organizational training project.

THE BOUNDARIES OF A SCHOOL ORGANIZATION

An action project like ours brings out the open nature of a school in bold relief. A number of times we were confronted with the impact of an environment that limited the attainment of our goals.

In the school that environment was felt most keenly in the administrative roles. For instance, while we pursued the goal of dispersion of influence so that teachers might be more involved in selecting their area chairmen, the principal was told by central-office administrators that he was to nominate them and that he was responsible for their work.

Similarly, we attempted to help area groups to collaborate on changing curricula and especially to work together to find more creative forms of sharing resources through team teaching. For the foreign-language group, however, a district-level committee under the leadership of a central-office administrator made curricular revisions. Decisions about foreign languages made within the school were ineffective; the communication and problem-solving skills had to be carried into other regions of the school system to accomplish improved working relations among teachers of foreign language.

One of the most frustrating constrictions put on our training by the environment was the limitation on legitimate time during the school year for the training. To arrange for additional days of training or to work in the mornings rather than the afternoons would have required us to rearrange the movement and flow of youngsters through the school. Although this problem wasn't insurmountable, it would have necessitated communication and decision making with central-office administrators and perhaps even with the school board.

Highland Park Junior High School was part of a large school system; because of that, it was limited in its freedom of organizational movement.

Training interventions must take these limits into consideration. For instance, we simply could not emphasize new procedures for selecting area coordinators, or refurbish problem-solving procedures in the foreign languages, or use different days and times for training from the ones we had. We would have had to work with more of the entire school system to accomplish these ends.

Since the larger school system continuously impinges on the school-building staff, changes once made in the building might regress due to central-office pressures. We did nothing to help Highland Park to cope effectively with such environmental pressures. One possible approach would have been to give special training to some of the Highland Park staff members to serve as "group facilitators" and to arrange for training sessions periodically during the year. Then, if regression were noted, the staff would have a builtin role system for confronting it and for resuming problem solving.

Such a role will be tested in later CASEA projects.

Appendix A

The School District and the Historical Events Leading to the Project

School District 48 of Beaverton, Oregon was formed in 1960. The thirteen separate districts that comprised the Beaverton Schools in 1960 had grown rapidly during the 1950's. While student enrollment tripled from 3,336 in 1950 to 10,021 in 1960, voters approved more than $8 million in levies to provide new classrooms. An average of twenty-four new classrooms was added each year, along with facilities such as libraries, cafeterias, gyms, and playgrounds. Ten new buildings and forty-three additions were constructed. Growth was so rapid that many buildings required additions within one or two years after their original construction.

Since the reorganization of 1960, voters of the district supported two major bond issues. A $2,720,000 issue in March 1962 paid for the construction of two new intermediate schools, additions to three elementary schools, and sites for three more schools. The $3,720,000 issue approved in October of 1963 covered the cost of constructing two more intermediate schools, additions to two intermediate schools and three elementary schools, and one elementary site, as well as part of the cost of another site. All four intermediate schools utilized the same basic architectural plan to reduce cost. One of these new intermediate schools was Highland Park Junior High School.

Beaverton, a bedroom suburb, feeds the labor market of the greater Portland area. Highland Park Junior High was built in the middle of the rapidly developing southwest section of Beaverton. The neighborhood surrounding the school is made up largely of tracts of moderately priced houses. Most families appear to be lower-middle or middle-middle class. All are white and mostly of northern European heritage. Typical occupations include skilled blue-collar workers, white-collar clerks, small businessmen, and foremen. Undoubtedly some junior executives and professional people live here, but it is likely that their tenure in this neighborhood isn't lengthy. The families

that live near Highland Park Junior High School appear to be young and upward mobile, and most probably support "forward-looking" educations for their youngsters. College would be viewed by most as an asset and by many as a necessity. To this milieu a staff of over fifty professionals came in the fall of 1965 to commence operations at Highland Park Junior High School.

Seeds for the organizational training were planted during the 1964-65 school year. The events that led to the training have been compiled partly from documents, but mostly from interviews with the actors in the drama.

Gene Springer and John Dahlberg, both destined to become administrators at Highland Park, were principal and vice-principal respectively of the Merle Davies Elementary School, being used as a temporary facility for seventh grade students prior to moving into the new building. Both men enjoyed working with small groups of staff members to solve problems and develop curriculum. Both felt secure with nonauthoritarian, unstructured group procedures.

During the summer of 1965 Springer participated in a human relations workshop for principals (led by Leonard Lansky under CASEA auspices) along with three other Beaverton administrators. His belief that interpersonal group methods constituted means for improving the school's operation was strengthened by his experiences at the workshop and by the positive attitudes of his Beaverton colleagues who also attended. At the same time, Dahlberg attended a workshop concerned with uses of computers in Bend, Oregon, where he met Ray Talbert who was then principal of Bend High School. Since Talbert was to become director of the Oregon Compact, a Title III program to encourage innovations in secondary schools, Dahlberg unwittingly laid the groundwork for the funding of the training program.

Highland Park Junior High School commenced full operation in the fall of 1965. Organizing the new staff into an effective unit proceeded smoothly. Eight staff members came from the Merle Davies School with established working relationships. They constituted a core group that had collaborated with Springer and Dahlberg in planning for Highland Park during the previous year. They came from various elementary schools, existing intermediate schools, and the two high schools, or directly out of college. Most were enthusiastic about the prospect of a new building, a new staff, new youngsters, and the challenges of creating a junior high curriculum. Even with the satisfaction of high staff morale, however, Springer and Dahlberg worried about the depth of the staff's involvement and the effectiveness of relationships once the glow of the first year passed. They continued to dream about some group-relations training for the staff.

Meanwhile, Talbert entered into planning sessions for the developing Oregon Compact. By the winter of 1965-66 a proposal was written and accepted for a year of planning specific directions for the Oregon Compact. As part of that year. Talbert attended a two-week human relations laboratory for educational leaders sponsored by the National Training Laboratories during the summer of 1966. There he met Richard Schmuck, who served as a dean for that laboratory. Talbert left the laboratory convinced that small-group training procedures could make a significant contribution to bringing about effective innovation in secondary schools. At home, he recommended that the Oregon Compact devote part of its resources to training entire professional

staffs in how to organize more effectively for change. By the fall of 1966 Talbert was ready to receive a proposal for organizational training in a secondary school, and he encouraged Springer and Dahlberg to submit one.

In September, 1966, the two began in earnest to plan a proposal for funds. The cordial relationships of the first year had worn off and the staff was forming into cliques and hostile camps.

One cadre of staff members, with administrative encouragement, formed into an interdisciplinary "teach group" to invent new procedures for team teaching and a more integrated education for each student. Another cluster of staff members wanted to be left alone to teach the customary ways. Some wanted an English-social studies core; others did not. A few wanted teachers observing each other; most certainly did not. The stage was set for an organizational training event; but additional events, even more important than that which proceeded it, were to occur first.

With Beaverton continuing to grow at an astronomical rate, need was great for still more funds to pay for new buildings and staff. A bond issue which had been opposed during the 1965-66 academic year passed in the early fall of 1966. One of the first moves to follow was the designation of a new position in the central office titled *building project manager*. Springer was a natural choice for the position. He had worked in a number of buildings, had served on committees that planned most of the new buildings since 1960, and had the skills of a journeyman carpenter. While many parents rejoiced in a successful bond issue, the Highland Park faculty was concerned about who would succeed Springer. During the last week in September of 1966, Springer went to his new position in the central office, leaving Dahlberg as acting principal and a vacancy which needed to be filled immediately.

Within ten days after the vacancy was announced on October 1, Jack Nelson, a junior high school principal, was appointed; but he did not assume responsibilities until the first of November. In the interim, many of the staff, dissatisfied about the change in principals, prepared for what they thought would be a difficult year. The acting principal, meanwhile, delayed preparation of the proposal for an organizational training event and spent much of his time listening to the negative feelings of staff members who were dubious about Nelson becoming their principal.

On some days, Dahlberg reports, he was besieged until 8 P.M. by worried staff members who feared that their next principal would be authoritarian. Many of these doubts appear to have arisen out of a context of extraordinarily strong attractions for Springer rather than from direct experiences with Nelson. Five staff members in particular felt very close to Springer; Dahlberg himself held Springer in high esteem. Dahlberg said that Springer "gave great support to people," "he stood behind his teachers 115 per cent of the time," "he listened openly to everyone," "he was a real confidante," and "he was very easy to get near." These images of Springer were in great contrast to the images many Highland Park teachers held of Nelson.

Some staff members who had previous experiences with Nelson viewed him as overly formal, distant, and too controlling. Four persons had taught under Nelson in an elementary school and remembered difficulties. Two teachers' spouses had similar memories of their professional relationships with Nelson. More generally, few staff members seemed to support the change in principal-

ship at Highland Park. Nevertheless, despite the many negative attitudes, the change went smoothly in most respects.

Dahlberg and Nelson, in collaboration, wrote the proposal for staff training in October and November. Nelson entered into the planning with considerable enthusiasm, no doubt surprising some staff members with his readiness to participate in interpersonal training on an equal footing with the rest. He secured administrative and budget approval of the proposal and presented it to Talbert in December. Oregon Compact approved the project in March of 1967. In April Talbert spoke to Schmuck about the project, and Schmuck discussed it with Nelson in May. In June, 1967, Nelson attended a human relations workshop as preparation. CASEA undertook the project during the summer and began work on the design for the training events of the 1967-68 school year at Highland Park Junior High and the design for evaluating their effects.

Appendix B

Materials Used with the Exercise "The Trip Across the Moon"

NASA: DECISION BY CONSENSUS

INSTRUCTIONS: This is an exercise in group decision-making. Your group is to employ the method of *group consensus* in reaching its decision. This means that the prediction for each of the 15 survival items *must* be agreed upon by each group member before it becomes a part of the group decision. Consensus is difficult to reach. Therefore, not every ranking will meet with everyone's complete *approval.* Try, as a group, to make each ranking one with which all group members can at least partially agree. Here are some guides to use in reaching consensus:

1. **Avoid *arguing* for your own individual judgments. Approach the task on the basis of logic.**
2. **Avoid changing your mind *only* in order to reach agreement and avoid conflict. Support only solutions with which you are able to agree somewhat at least.**
3. **Avoid "conflict-reducing" techniques such as majority vote, averaging, or trading in reaching a decision.**
4. **View differences of opinion as helpful rather than as a hindrance in decision making.**

On the "Group Summary Sheet" place the individual rankings made earlier by each group member. Take as much time as you need in reaching your group decision.

RATING SHEET

INSTRUCTIONS: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Because of mechanical difficulties, however, your ship was forced to land at a spot

some 200 miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged; and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank-order them in terms of the importance for your crew in enabling them to reach the rendezvous point. Place the number *1* by the most important item, the number *2* by the second most important, and so on through number *15*, the least important.

_____ Box of matches
_____ Food concentrate
_____ 50 feet of nylon rope
_____ Parachute silk
_____ Portable heating unit
_____ Two .45 calibre pistols
_____ Two 100-lb. tanks of oxygen
_____ Stellar map (of the moon's constellation)
_____ Life raft
_____ Magnetic compass
_____ 5 gallons of water
_____ Signal flares
_____ First aid kit containing injection needles
_____ Solar-powered FM receiver-transmitter
_____ One case dehydrated milk

GROUP SUMMARY SHEET

Group ranking
Ranking of sums
Sums of individual rankings
Individual rankings

	1	2	3	4	5	6	7	8	9	10
Box of matches										
Food concentrate										
50 feet of nylon rope										
Parachute silk										
Portable heating unit										
Two .45 calibre pistols										
One case dehydrated Pet milk										
Two hundred-pound tanks of oxygen										

156

Stellar map (of the moon's constellation)
Life raft
Magnetic compass
Five gallons of water
Signal flares
First aid kit containing injection needles
Solar-powered radio

Appendix C

The Five-Square Puzzle

INSTRUCTIONS TO GROUP MEMBERS

The envelopes you have received contain enough parts to make five 8" x 8" squares.

Your task will be completed when each member of your group has constructed an 8" x 8" square. You are to follow the rules given below.

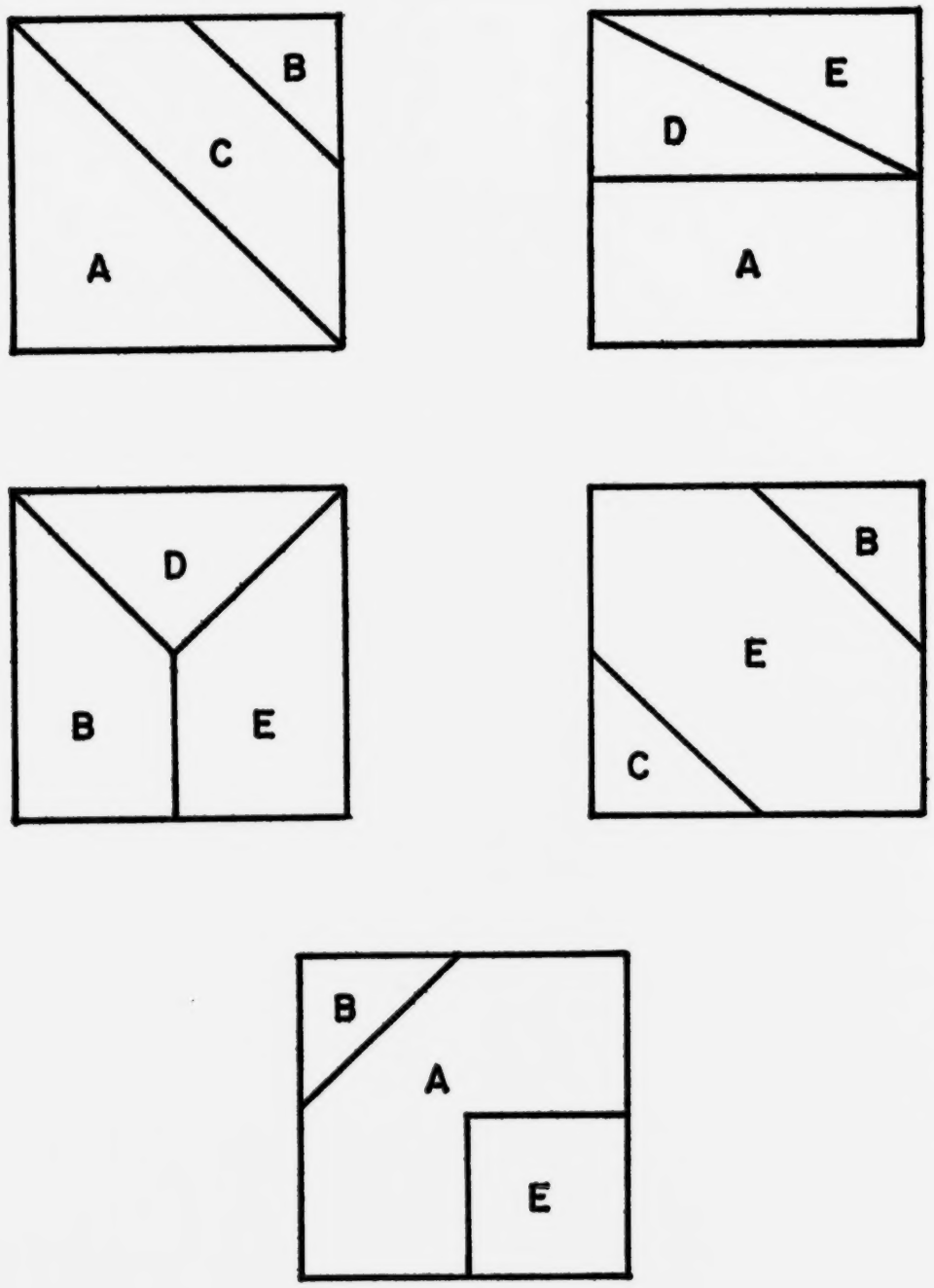
RULES:

1. **Each member must construct one square directly in front of his work place.**
2. **No member may talk, signal, or gesture in any way that would provide guidance, direction, or suggestion to any other group member. For example, no member may signal that he wants a piece from another member.**
3. **Any member may give any of his pieces to another member.**
4. **Each member's pieces should be in front of him except those he is giving to another member.**

The Five-Square Puzzle

This diagram shows the pieces needed for one group of five persons and the way in which the pieces fit together into five squares.

At the outset, the pieces labeled "*A*" are given to the participant labeled "*A*", the "*B*" pieces are given to "*B*" etc.



Appendix D

The Hollow-Square Problem

STEP-BY-STEP PROCEDURE

1. The trainer states that this is a simulation in which planners instruct operators to carry out a task. He divides the group into four-person planning teams and four-person operating teams and observers. Observers step out of the room to be briefed by the trainer, operators step out into the adjoining waiting room. Planners begin to meet around their tables just to get acquainted.
2. The trainer briefs observers out of earshot of both the planners and operating teams on what to look for in the planning, communicating and implementing stages of the exercise.
3. The trainer hands out briefing sheets and puzzle materials to planning teams. He reads through the briefing sheets orally and planners begin their task. He emphasizes the time at which they must conclude their planning.
4. The trainer then goes to room where operating teams wait to tell them of their task during the waiting period. Essentially, this is to discuss (a) how they feel while waiting to be instructed, and (b) how a person can prepare for an unknown task.
   They are told that their planning team may summon them to the room at any time; but if they are not called in prior to five minutes before the starting of the task, they are to "report for work" anyway.
5. The planning gets underway, followed by the planning teams calling in the operating teams to give them their instructions.
6. The trainer calls time to begin and instructs planners to step back from the table and to remain silent as the operating teams begin.
7. Operators complete the task, according to their instructions, taking as much time as is necessary.

8. Discussion includes reports from the observers, planners, and operators and the development of generalizations.

SUGGGESTIONS FOR DISCUSSION OF THE EXPERIENCE

1. It is possible to divide the discussion issues into three parts (a) problems during the planning phase, (b) problems during the instruction phase when planners were telling operators what to do, and (c) problems during the operating phase. In each of these instances, it is useful to get data from observers as to what helped and hindered the process and to verify this and supplement it with feeling data from both planners and implementers.
2. To get at some generalizations it is helpful to ask how this task could be handled more efficiently another time.
3. With this exercise, generalizations about planning and delegating tend to flow easily from the group. These can be recorded on blackboard or newsprint.
4. As each generalization or observation emerges, it may be useful for people to report what analogous problems they have observed in their back-home situation.
5. In addition, the trainer who has conducted this exercise previously can report additional learnings which have occurred in other groups.
6. It would be possible to develop standard reaction sheets for both the planners and the implementers which could be summarized by the trainer while the groups are hearing the observation from the observers.

BRIEFING SHEET FOR PLANNING TEAM

Each of you will be given a packet containing four pieces which, when properly assembled, will make a hollow-square design.

Your task

During a period of 45 minutes you are to do the following:

1. Plan how the 18 pieces distributed among you should be assembled to make the design.
2. Instruct your OPERATING TEAM on how to implement your plan (you may begin instructing your OPERATING TEAM at any time during the 45-minute period—*but no later than* 5 minutes before they are to begin the assembling process).

General rules

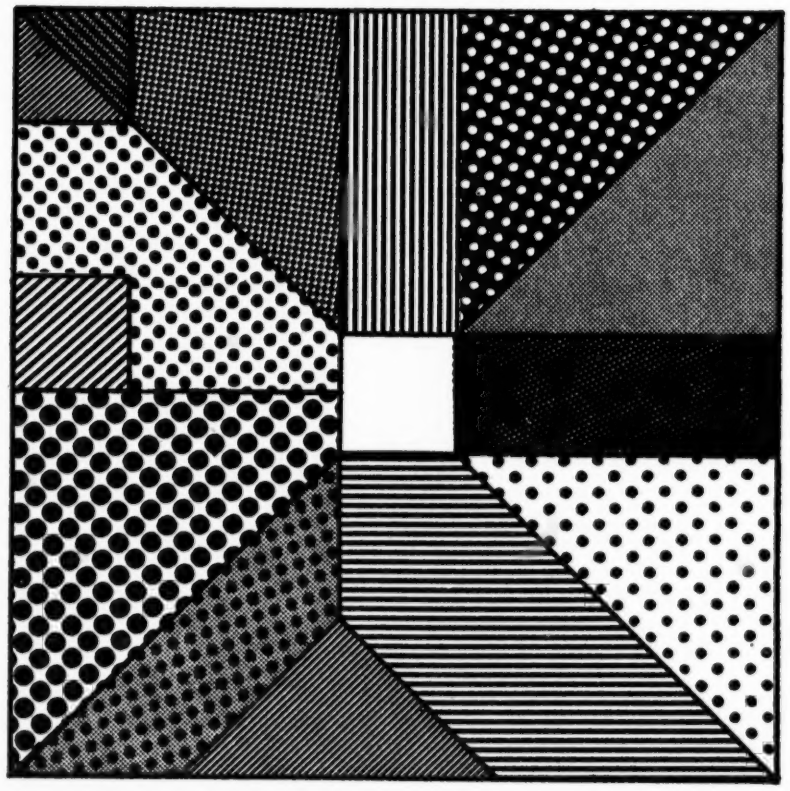
1. You must keep all pieces you have in front of you at all times.
2. You may *not* touch or trade pieces with other members of your team during the planning or instructing phase.
3. You may *not* show the sheet with the detailed design to the OPERATING TEAM at any time.
4. You may *not* assemble the entire square at any time (this is to be left to your OPERATING TEAM).

5. You are *not* to mark on any of the pieces.
6. Members of your OPERATING TEAM must also observe the above rules until the signal is given to begin the assembling.
7. When time is called for your OPERATING TEAM to begin assembling the pieces, you may give no further instructions but are to observe the operation.

BRIEFING SHEET FOR OPERATING TEAM

1. You will have responsibility for carrying out a task for 4 people according to instructions given by your PLANNING TEAM. Your PLANNING TEAM may call you in for instructions at any time. If they do not summon you before..... you are to return to them anyway. Your task is scheduled to begin promptly at..... after which no further instruction from your PLANNING TEAM can be given. You are to finish the assigned task as rapidly as possible.
2. During the period when you are waiting for a call from your PLANNING TEAM, it is suggested that you discuss and make notes on the following:
   a. The feelings and concerns which you experience while waiting for instructions for the unknown task.
   b. Your suggestions on how a person might prepare to receive instructions.
3. The notes recorded on the above will be helpful during the work group discussions following the completion of your task.

COMPLETED PUZZLE



Appendix E

Memo on Report to the Oregon Education Association

Memo from Richard Schmuck dated 16 April 1968 to CASEA staff of Highland Park Project concerning Report to Research Conference of the Oregon Education Association.

On Saturday, April 6, 1968, Jack N, Janis T, and Sam S made a presentation at the Ninth Annual Oregon Education Association Research Conference entitled, "Total Staff Involvement in Interpersonal Relationships." Their report, which they initiated and designed, was about the CASEA project, "Communication and Problem Solving in a Junior High Faculty." The following notes summarize the key points made during their 40-minute presentation.

Jack N. introduced the project to an overflow audience of approximately 50 educators. He said that the training events were entered into by the entire faculty and that they were aimed at improving relationships between teachers, between teachers and students, and between teachers and himself as the administrator. Jack commented that the most significant accomplishment from his point of view was improved relationships and communication between the teachers and himself. He felt that his participation in the workshop as "one of the group" facilitated his getting closer to the staff. Also, he felt that the follow-up sessions later in the year were necessary parts of the total project, that without such reinforcement, the initial successes would have been lost. He added that having the entire faculty present was extremely important and helpful to the project. Jack completed his introductory remarks by introducing Mrs. Janis T., who was asked to describe her reactions to the workshop from the point of view of a new teacher.

Janis said that at the very beginning of the workshop she was frightened and anxious. She wondered if others would like and respect her. She wondered to what extent she should put herself "on the line" at the workshop. In reflecting on the entire process, she felt that the workshop and follow-up training events could be commended for five reasons.

First, Janis felt that the workshop offered all new teachers a very meaningful membership on the faculty. During the workshop, the teachers expressed

deep, personal feelings and many close, interpersonal bonds were formed. She said that the rest of the year was made enjoyable and that her relationships with others were open and supportive because of the workshop. She reported that the first week of school teaching was much more exciting than expected because of the supportive relationships that had been formed. Many of these close relationships involved sharing teaching plans and practices that continued throughout the year.

A second benefit of the training has been honest and open relationships on the staff. She said that some people reacted against the training, a few even violently; but even these people have been open and have continued to maintain dialogue with other staff members. The increased honesty in relationships has built trust among the staff. Janis said that she has heard many say that much more trust exists this year compared with last.

A third positive result has been clarity of communication. Many staff members use such phrases as, "Did I understand you to say . . . ?" or "Let me check that, did you mean . . . ?" or even "Please repeat that!" She said it was difficult for her to compare with previous years, but that she has never been with a group of people so conscious of clarity and dialogue. She felt that the honesty was greatly helping communication.

A fourth positive outcome has been the "spill-over" of this training into the classroom. More teachers seem willing to have students evaluate their teaching behavior. She said she has tried to be open in her classes, to "express her deepest feelings," and to "encourage students to be frank about their feelings." She said that her relations with students are closer now than she had expected them to be before teaching.

A fifth result has been that some staff members do not want to continue with such training. But even this is positive in a way, she said; they feel free to talk about this and aren't rejected by other staff members.

Next, Sam S. presented his perceptions from the point of view of a teacher who has been on the staff for several years. Sam felt that the training events have supported major improvements in staff communication, participation, and administrator-teacher relations. He added that the involvement of the cooks and custodians has led to increased understanding and rapport between the professional and nonprofessional staffs.

Although some teachers have had difficulty in accepting these group processes, there has been a slow evolvement of "even the most traditional teachers." Many teachers have moved much closer to one another this year, he added. Now "rumors are challenged publicly, while last year little cliques would form to hide things." "Groups are more fluid this year, and staff members are in more subgroups." "During lunch time there is much more moving around from group to group this year."

Perhaps the most significant event, according to Sam S, has been the practice of staff members initiating and designing faculty meetings. Last year this was the sole domain of the principal. Now if a meeting is needed anyone can call it. Also, he added that communication has improved greatly among the area chairmen and that relationships in his own department are "close, supportive, and effective."

"Naturally," he added, "departments differ on how successful they have been; but generally speaking, openness has increased in all departments."

Finally, interdepartmental communication, especially about curriculum,

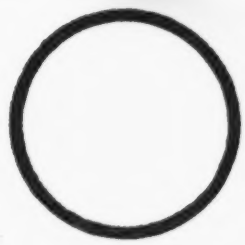
has increased; teachers and counselors are much closer together this year than last; and, most importantly, the staff feels as though they are "on their way."

Jack N. completed the presentation by describing some concrete changes that had taken place on the staff. First, he said, there is more open use of one another's resources. Second, greater and more general participation is taking place in staff meetings and committees. Third, group processes such as the "fishbowl" and "empty-chair" techniques were used in preparing the "Teacher Handbook." Finally, staff members are now initiating staff meetings.

Appendix F

Questionnaire on Communication

1. In every organization of any size, there are some people who give orders to others. Even if they don't exactly give orders, at least you'd think twice before telling them you're not going to go along with their suggestions. Who is there in this organization who brings you orders or suggestions orally? (Please omit people who send you directives only on paper.) Please write their names at the left side of this page, below. There could be more than one, of course, but there can't be very many.



2. Now, probably those people (though perhaps you named only one) you named have people who now and then tell *them* what to do. Perhaps you have information about this. If you believe you know who would bring orders or directives *orally* to the first person you wrote down above, please write his name (or their names) at the right side of this sheet; circle the name or names, and draw a line to the name at the left. (As an example, we have drawn a circle that might contain a name or two of people who bring oral instructions to the first person whose name you might have written at the left.) If you write more than one name in answer to the first question, do this same thing with each of the names. If you do not know who might bring directives to someone, write "DK" at the right side of the page.

3. There are at least a few other people in this organization, perhaps more

than a few, to whom you talk at least once a month outside formal meetings about some matter important to you. Among these to whom you talk, some also talk to each other. Can you think of two other people to whom you talk at least once a month about some reasonably important matter, *and* who you have good reason to believe also talk to each other at least once a month? If so, please write the names of the two people here:

---------- and ----------

Can you now think of two more such people? Please write below, in a similar fashion, all pairs of people to both of whom you talk *and* who you are fairly sure also talk to each other at least once a month. (It is possible for one person to appear in more than one pair; that is, you might talk to A and B who also talk to each other; you might also talk to A and C who also talk to each other; etc.)

Appendix G

QUESTIONNAIRE
ADMINISTERED AT HIGHLAND PARK
IN MAY, 1968

Please write your name here:

Do not write your name on any other sheet.
When this questionnaire reaches our office,
we shall immediately write a number
on the sheets of the questionnaire
and destroy this sheet with your name on it.

The personnel processing the data
will never see your name.

Only one file will identify your name
with its corresponding number,
and only a few professional people
will have access to that file.
They will refer to this file
only for the purpose of matching together
the data that belongs together
in future years.

And our professional people
are bound by the ethics of their profession
to keep confidential
any information you give us.

You need not write down your name at all
if you prefer not to do so.

1. Please write below the *position-title* that applies to your employment in your school. If you have more than one position-title, write them all. After each title, put the approximate percentage of full time that your work under that title requires.

_____ _____ percent
_____ _____ percent
_____ _____ percent
_____ _____ percent

2. A school system cannot be all things to all people. Considering the staff in your school system, the financial support for the system, the kinds of children who attend the schools, and the attitudes of the community, what would you feel are *the four* primary objectives toward which effort should be put in your school *system* during the next two years? Put 1 by the one most important, 2 by the next most, 3 by the next most, and 4 for the 4th most important.. Remember, you are thinking of objectives for this school *system* for the *next two* years. Use each numeral once, 1, 2, 3, 4, to show the four objectives you feel are primary. Leave seven items blank.

_____ (a) Reducing the *dropout rate*
_____ (b) Improving attention to *basic skills in the first three grades*
_____ (c) Improving attention to *physical health and safety of students*
_____ (d) Increasing children's *motivation and desire to learn*
_____ (e) Improving learning opportunities for *disadvantaged children*
_____ (f) Increasing the percentage of *college attendance* by graduates
_____ (g) Improving *discipline* and the behavior of "difficult" children
_____ (h) Increasing the level of *academic achievement* in all grades
_____ (i) Improving children's adherence to *moral and ethical standards*
_____ (j) Improving learning opportunities for *gifted or talented children*
_____ (k) Other; specify _____
_____
_____
_____

3. Please think of the person (or group) who has the most control over your work—for example, perhaps your principal or department head. Write the position of this person (or group) here (not name):

_____

4. Now here is the same list of objectives again. This time, please estimate how the person whose position you have written above would answer it. Put 1 to show your estimate of what he or she would regard as the one most important objective for the next two years, 2 by the next most, and so on. Use each numeral once, 1, 2, 3, 4, and leave the rest blank. If you are not sure, write "DK."

_____ (a) Reducing the *dropout rate*
_____ (b) Improving attention to *basic skills in the first three grades*

_____ (c) Improving attention to *physical health and safety of students*
_____ (d) Increasing children's *motivation and desire to learn*
_____ (e) Improving learning opportunities for *disadvantaged children*
_____ (f) Increasing the percentage of *college attendance* by graduates
_____ (g) Improving *discipline* and the behavior of "difficult" children
_____ (h) Increasing the level of *academic achievement* in all grades
_____ (i) Improving children's adherence to *moral and ethical standards*
_____ (j) Improving learning opportunities for *gifted or talented children*
_____ (k) Other; specify _____

_____

_____

_____

5. How about recent changes that could have useful effects on your school? Have there been any innovations, any new ways of doing things, that began during the last year or two that you think could have helpful effects in the school? If so, please describe each very briefly below. If none, write "none."

1. _____

_____

_____

2. _____

_____

_____

3. _____

_____

_____

4. _____

_____

_____

6. Suppose a teacher (let's call him or her Teacher X) disagrees with something B says at a staff meeting. If teachers you know in your school were in Teacher X's place, what would most of them be likely to do?

Would most of the teachers you know here seek out B to discuss the disagreement?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not*.
( ) I don't know.

7. Would they keep it to themselves and say nothing about it?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.

( ) No; most would *not.*
( ) I don't know.

8. In every organization of any size, there are some people who give orders to others. Even if they don't exactly "give orders," at least you'd think twice before telling them you're not going to go along with their suggestions. Who is there in your school or school system who brings *you* orders or directives *orally?* (Please omit people who send you directives only on paper.) Please write their names below. There could be more than one, of course, but there can't be very many.

(A)_____ (C)_____
(B)_____ (D)_____

(Please write first names or initials and last names wherever you remember them.)

9. In the following space, please copy the name of the person you wrote after (A) above:_____
Maybe there are persons who can tell *this person* what to do. Perhaps you have information about this. If you believe you know who would give orders or directives *orally* to this person, please write the name or names below. If you do not know who might give orders or directives orally to this person, write "DK."

_____ _____
_____ _____

10. If you wrote a name after (B) above, please copy that name here:

_____

Then write below the name of anyone you believe would give orders or directives orally to this person.

_____ _____
_____ _____

11. If you wrote a name after (C) above, please copy that name here:

_____

Then write below the name of anyone you believe would give orders or directives orally to this person.

_____ _____
_____ _____

(Please write first names or initials and last names wherever you remember them.)

12. Perhaps there are some people in your organization with whom you talk rather frequently about matters important to you. Please think of people with whom you talk *seriously about things important to you,* inside or outside formal meetings, *once a week or more* on the average. Write their names below. (If there are fewer than six people with whom you talk

once a week about matters important to you, write down only as many as there are; if none, write "none." If there are more than six, list just the six with whom you feel your conversations are the most satisfying.)

1._____ 4._____

2._____ 5._____

3._____ 6._____

13. Now look back at the question just above. Each name is numbered. Listed below are all the pairs that can be made among six numbers. Perhaps you know whether some of the six people talk *to each other* about matters important to them. Please look at each pair of numbers below, look back to see what names they represent, and *circle* the pair of numbers if you have good reason to believe that the two people talk to each other *once a week or more* about matters important to them.

1-2				
1-3	2-3			
1-4	2-4	3-4		
1-5	2-5	3-5	4-5	
1-6	2-6	3-6	4-6	5-6

14. After one has belonged to an organization for a while, he almost always finds some others whom he feels are his sort of person within the organization. In a group like this, one feels he can work with them or talk with them without "directing" them and without being "directed" by one of them. Maybe the people in such a group trade off taking charge of things when there is a job to do, but nobody is the regular leader or tries to get to be the regular leader. Is there a bunch (more than one other person) like this in your school or school system that you get together with sometimes?

No_____ Yes_____ If yes, please write the names of the others below:

(Please write first names or initials and last names wherever you remember them.)

15. Some individuals in an organization inspire our trust. We feel they are special people in whom we can confide many things we would not tell others. Usually we don't find very many people like this, but it is good to have a few people (even only one) to talk to about things that other people wouldn't want to hear or would actually resent our wanting to talk about. Is there someone in your school or school system whom you

trust with this special kind of confidence? Please write the name (or names) below.

16. Think of three people in your school or school system, if you can, whose views about school policy are substantially the same as yours. Write their names on the lines below. If there are none, write "none."

_____ _____

_____ _____

17. Suppose a teacher (let's call him or her Teacher X) feels hurt and "put down" by something another teacher has said to him. In Teacher X's place, would most of the teachers you know in your school be likely to...

...avoid the other teacher?

( ) Yes, I think most would.
( ) Maybe about half would.
( ) No; most would *not.*
( ) I don't know.

18. ...tell the other teacher that they felt hurt and put down?

( ) Yes, I think most would.
( ) Maybe about half would.
( ) No; most would *not.*
( ) I don't know.

19. ...tell their friends that the other teacher is hard to get along with?

( ) Yes, I think most would.
( ) Maybe about half would.
( ) No; most would *not.*
( ) I don't know.

20. Suppose you are in a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school; Teacher X quickly suggests that the committee get back to the topic and keep the discussion objective and impersonal. How would you feel toward X?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.

( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

21. Suppose you are in a committee meeting with Teacher X and the other members begin to describe their personal feelings about what goes on in the school; Teacher X listens to them and tells them his own feelings. How would you feel toward X?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.
( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

22. Suppose Teacher X develops a particularly useful and effective method for teaching something. In Teacher X's place, would most of the teachers you know in your school . . .

. . . describe it briefly at a faculty meeting and offer to meet with others who wanted to hear more about it?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not.*
( ) I don't know.

23. . . . say nothing about it unless somebody asked them, then maybe say a little about it?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not.*
( ) I don't know.

24. . . . try to get administration backing for a project to get other teachers to use the method?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not.*
( ) I don't know.

25. Suppose Teacher X wants to improve his classroom effectiveness. If X asked another teacher to observe his teaching and then have a conference about it afterward, how would you feel toward X?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.

( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

26. Suppose Teacher X wants to improve his classroom effectiveness. If X asked another teacher to let him (X) observe the other teacher teach, how would you feel toward X?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.
( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

27. Suppose Teacher X wants to improve his classroom effectiveness. In Teacher X's place, would most of the teachers you know in your building . . .

. . . ask another teacher to observe his teaching and then have a conference afterward?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not*.
( ) I don't know.

28. . . . ask other teachers to let him (Teacher X) observe how the other teachers teach, to get ideas how to improve their own?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not*.
( ) I don't know.

29. . . . have a free and open discussion with his students about his teaching?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would *not*.
( ) I don't know.

30. . . . ask the principal to observe his teaching and then have a conference afterward?

( ) Yes, I think most would do this.
( ) Maybe about half would do this.
( ) No; most would not.
( ) I don't know.

31. Suppose Teacher X disagrees with a procedure that the principal has

outlined for all to follow. If Teacher X were to go and talk with the principal about his disagreement, how would you feel about it?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.
( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

32. Suppose Teacher X disagrees with a procedure that the principal has outlined for all to follow. If X were to say nothing but ignore the principal's directive, how would you feel about it?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.
( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

33. Suppose Teacher X develops a particularly useful and effective method for teaching something. If X were to describe the method briefly at a faculty meeting and offer to meet further with any who wanted to know more, how would you feel about it?

( ) I would approve strongly.
( ) I would approve mildly or some.
( ) I wouldn't care one way or the other.
( ) I would disapprove mildly or some.
( ) I would disapprove strongly.

34. Your plans for the next school year may be indefinite at this time, but please give us your best guess as to what you will be doing next fall.

( ) I expect to teach in this school district.
( ) I expect to teach in another school district.
( ) I expect to be working in education but NOT as a classroom teacher.
( ) I expect to devote my time to full-time homemaking.
( ) I expect to be in military service.
( ) I expect to go back to school for further training in education.
( ) I expect to go back to school for training in a field outside of education.
( ) I expect to be gainfully employed outside of education.
( ) Other—please describe:

PLEASE USE the back of this page for comments on training in interpersonal relations, or comments on this questionnaire, or any other thoughts you may wish to offer.

Appendix H

The Principal of This School

To what extent does your principal engage in the following kinds of behavior? In answering, please circle the *one* number in each row that best describes the behavior of your principal.

	Never	*Almost Never*	*Occasionally*	*Frequently*	*Almost always*	*Always*	*I do not know*
1. Gives teachers the feeling that their work is an "important" activity	0	1	2	3	4	5	X
2. Gives teachers the feeling that they can make significant contributions to improving the classroom performance of their students	0	1	2	3	4	5	X
3. Takes a strong interest in my professional development	0	1	2	3	4	5	X
4. Makes teachers' meetings a valuable educational activity	0	1	2	3	4	5	X
5. Helps to eliminate weaknesses in his school	0	1	2	3	4	5	X
6. Treats teachers as professional workers	0	1	2	3	4	5	X
7. Helps teachers to understand the sources of important problems they are facing	0	1	2	3	4	5	X

	Never	Almost Never	Occasionally	Frequently	Almost always	Always	I do not know
8. Displays a strong interest in improving the quality of the educational program	0	1	2	3	4	5	X
9. Brings to the attention of teachers educational literature that is of value to them in their jobs	0	1	2	3	4	5	X
10. Has constructive suggestions to offer teachers in dealing with their major problems	0	1	2	3	4	5	X
11. Gets teachers to upgrade their performance standards in their classrooms	0	1	2	3	4	5	X
12. Maximizes the different skills found in his faculty	0	1	2	3	4	5	X
13. Makes a teacher's life difficult because of his administrative ineptitude	0	1	2	3	4	5	X
14. Runs conferences and meetings in a disorganized fashion	0	1	2	3	4	5	X
15. Has the relevant facts before making important decisions	0	1	2	3	4	5	X
16. Displays inconsistency in his decisions	0	1	2	3	4	5	X
17. Procrastinates in his decision making	0	1	2	3	4	5	X
18. Requires teachers to engage in unnecessary paper work	0	1	2	3	4	5	X
19. Displays integrity in his behavior	0	1	2	3	4	5	X
20. Puts you at ease when you talk with him	0	1	2	3	4	5	X
21. Makes those who work with him feel inferior to him	0	1	2	3	4	5	X
22. Develops a real interest in your welfare	0	1	2	3	4	5	X
23. Develops a "we" feeling in working with others	0	1	2	3	4	5	X
24. Rubs people the wrong way	0	1	2	3	4	5	X

Appendix I

HIGHLAND PARK VERSUS SCHOOLS NEAR NEW YORK: PRETEST MEANS FOR THE QUESTIONNAIRE ON PRINCIPAL

Item	*HP*	*A*	*B*	*C*	*D*	*E*	*F*	
1	4.57	5.10	*4.15*	*4.37*	*4.05*	5.21	*3.63*	
2	4.19	5.11	*4.13*	4.29	*4.10*	5.16	*3.00*	
3	3.91	4.59	*3.84*	4.18	*3.59*	4.76	*2.79*	
4	2.76	4.28	3.13	3.05	3.93	3.78	3.38	
5	3.89	5.18	*3.71*	4.14	4.33	5.12	4.68	
6	4.65	5.31	4.95	*4.51*	4.74	5.32	*4.06*	
7	3.47	4.73	3.82	4.05	4.05	4.56	3.67	
8	4.77	5.56	*4.31*	*4.67*	*4.50*	5.58	4.83	
9	3.31	5.08	*3.44*	4.26	3.63	4.32	*2.58*	
10	4.06	4.93	*3.45*	4.16	*3.79*	4.83	*3.57*	
11	3.73	4.95	*3.47*	3.93	*3.62*	4.83	*3.33*	
12	3.58	4.88	3.85	4.08	3.62	4.53	4.00	
13	2.12	1.60	*2.34*	*2.26*	2.12	1.72	1.73	Item phrased negatively
14	2.28	1.30	2.22	*2.47*	1.55	1.74	1.63	Item phrased negatively
15	4.32	5.28	*4.29*	4.51	4.79	5.00	5.08	
16	2.71	2.14	*2.83*	*2.95*	2.14	2.56	2.38	Item phrased negatively
17	2.41	1.74	*2.83*	1.85	1.97	2.00	*2.67*	Item phrased negatively
18	2.17	*2.24*	*2.25*	*2.58*	1.90	*2.18*	2.11	Item phrased negatively
19	4.72	5.74	5.06	5.33	4.82	5.58	*4.63*	
20	4.47	5.10	5.29	*4.21*	4.49	5.53	*3.89*	
21	2.44	2.13	1.47	2.08	2.28	1.63	2.00	Item phrased negatively
22	4.11	4.83	4.49	4.33	3.87	4.68	*3.31*	
23	3.97	4.85	4.63	4.07	4.08	4.68	*3.75*	
24	3.06	2.39	2.26	3.12	2.98	2.22	3.20	Item phrased negatively
	Number of items having more room to move positively than at Highland Park:							
		1	12	9	6	1	13	

Note: Italicized numbers indicate items having more room to move positively than at Highland Park.

Appendix J

Staff Meetings

The philosopher Martin Buber once said "All life is meeting." No matter how that statement makes you feel, you will probably agree that school systems hold a lot of meetings, and that much depends on their quality. We are thinking specifically of either meetings in which the entire faculty of your building meets (staff meetings) or meetings in which only a part of the faculty meets (committee meetings).

Name of the meeting you are considering _____

How often does it usually meet? _____

Length of typical meeting _____

Now please consider what usually or typically happens in this meeting. Beside each of the items below, put one of the following numbers.

5. This is *very* typical of this meeting; it happens *repeatedly.*
4. This is fairly typical of this meeting; it happens *quite often.*
3. This is more typical than not, but it *doesn't happen a lot.*
2. This is more untypical than typical, though *it does happen some.*
1. This is quite untypical; it *rarely* happens.
0. This is *not* typical at all; it *never* happens.

1. _____When problems come up in the meeting, they are thoroughly explored until everyone understands what the problem is.
2. _____The first solution proposed is often accepted by the group.
3. _____People come to the meeting not knowing what is to be presented or discussed.
4. _____People ask why the problem exists, what the causes are.
5. _____There are many problems which people are concerned about which never get on the agenda.

6. .....There is a tendency to propose answers without really having thought the problem and its causes through carefully.
7. .....The group discusses the pros and cons of several different alternate solutions to a problem.
8. .....People bring up extraneous or irrelevant matters.
9. .....The average person in the meeting feels that his ideas have gotten into the discussion.
10. .....Someone summarizes progress from time to time.
11. .....Decisions are often left vague—as to what they are, and who will carry them out.
12. .....Either before the meeting or at its beginning, any group member can easily get items onto the agenda.
13. .....People are afraid to be openly critical or make good objections.
14. .....The group discusses and evaluates how decisions from previous meetings worked out.
15. .....People do not take the time to really study or define the problem they are working on.
16. .....The same few people do most of the talking during the meeting.
17. .....People hesitate to give their true feelings about problems which are discussed.
18. .....When a decision is made, it is clear who should carry it out, and when.
19. .....There is a good deal of jumping from topic to topic—it's often unclear where the group is on the agenda.
20. .....From time to time in the meeting, people openly discuss the feelings and working relationships in the group.
21. .....The same problems seem to keep coming up over and over again from meeting to meeting.
22. .....People don't seem to care about the meeting, or want to get involved in it.
23. .....When the group is thinking about a problem, at least two or three different solutions are suggested.
24. .....When there is a disagreement, it tends to be smoothed over or avoided.
25. .....Some very creative solutions come out of this group.
26. .....Many people remain silent.
27. .....When conflicts over decisions come up, the group does not avoid them, but really stays with the conflict and works it through.
28. .....The results of the group's work are not worth the time it takes.
29. .....People give their real feelings about what is happening during the meeting itself.
30. .....People feel very committed to carrying out the solutions arrived at by the group.
31. .....When the group is supposedly working on a problem, it is really working on some other "under the table" problem.
32. .....People feel antagonistic or negative during the meeting.
33. .....There is no follow-up of how decisions reached at earlier meetings worked out in practice.

34. .....Solutions and decisions are in accord with the chairman's or leader's point of view, but not necessarily with the members'.
35. .....There are splits or deadlocks between factions or subgroups.
36. .....The discussion goes on and on without any decision being reached.

Appendix K

Highland Park Versus Schools near New York: Pretest Means for the Questionnaire on Staff Meetings

		Schools					*Schools*		
Item	*HP*	*A*	*C*	*D*	*Item*	*HP*	*A*	*C*	*D*
1	3.91	4.68	*3.88*	4.61	20	3.38	3.47	*2.49*	*3.00*
2*	2.94	*3.51*	2.86	*3.66*	21*	4.06	4.00	3.97	3.08
3*	4.31	4.26	2.17	2.34	22*	3.41	*3.69*	2.47	3.18
4	4.18	*3.92*	*2.95*	*4.13*	23	4.29	4.50	*3.35*	4.63
5*	4.14	4.00	2.61	2.89	24*	3.83	3.25	2.97	3.47
6*	3.53	*4.55*	*3.61*	*3.60*	25	2.97	4.36	*2.89*	3.63
7	4.54	*4.40*	*3.14*	*4.20*	26*	4.14	2.19	1.86	1.82
8*	3.49	*4.30*	*3.86*	3.22	27	3.74	4.08	*2.83*	4.16
9	3.91	4.17	*2.83*	*3.43*	28*	3.23	*4.29*	3.08	*4.16*
10	3.34	4.70	*2.58*	*2.84*	29	3.74	*3.73*	*2.73*	3.89
11*	3.83	*4.67*	3.50	*4.20*	30	3.83	4.52	4.16	*3.69*
12	4.31	4.45	*3.39*	*3.76*	31*	2.94	*4.96*	*4.59*	*4.62*
13*	3.44	*3.87*	2.84	3.35	32*	3.16	*4.47*	*3.57*	*3.81*
14	3.57	4.00	*2.58*	*3.14*	33*	3.63	*4.44*	3.58	3.43
15*	3.60	*4.18*	3.06	3.33	34*	3.09	*3.17*	2.53	3.00
16*	4.49	2.47	2.11	2.05	35*	3.20	*4.54*	*4.46*	*3.53*
17*	4.08	3.19	2.44	2.65	36*	3.37	*4.81*	*4.66*	*4.17*
18	3.83	5.07	4.49	4.38	37	3.71	4.40	*3.18*	*3.53*
19*	3.25	*4.83*	*3.65*	*4.05*					

Number of items having more room to move positively than at Highland Park:

18 20 18

*These items negatively phrased

Note: Italicized numbers indicate items having more room to move positively than at Highland Park.

Appendix L

Technical Information About the Data on Innovations

When we ask teachers if there have been "any innovations, any new ways of doing things," what kinds of phenomena come into the minds of teachers? Chapters 5 and 6 present evidence that almost everyone on the Highland Park staff considered the training they received from the CASEA crew beginning in August 1967 to be an unusual kind of training, yet only one person in December and two persons in May (see table 6-3) described an innovation that had been going on in their school in such terms that the coders could justifiably call it "training." (Two coders practiced using the categories in table 6-3 on actual responses until they and Runkel reached an agreement rate of about 95 per cent of responses encountered. Coders then began again and coded all responses independently. When they disagreed, the code supervisor (not Runkel) resolved the disagreement.) Except for mentions of curricular innovations and of establishing new jobs or duties, the number of mentions of any type of innovation almost never came to a number larger than a fourth of the number of respondents indicated in a column of table 6-3. Part of the explanation for the small fraction of faculty mentioning any one type of innovation lies, no doubt, in the fact that different people classify an innovation differently and put different labels on it in their minds. What one teacher describes as a new method of solving problems might be described by another teacher as a new form of subsystem of organizational structure.

It may be, too, that relatively more teachers at Highland Park were aware of innovations taking place in the school. For comparison, we can total the columns in table 6-3 and note that the three columns in which frequencies of responses exceed the number of respondents are the two Highland Park columns and Valley No. 1. (As many as four separate innovations were recorded [that is, coded] from the responses of any one respondent. Consequently, the number of innovations mentioned in any one column of table 6-3 could easily and by far exceed the number of respondents even

without having two responses from the same respondent cast into the same category.) The largest number of responses from Valley No. 1 is accounted for by the exceptionally large number of respondents aware of curricular innovations. Except for the case of Valley No. 1, curricular innovations account for about as many responses from Highland Park as from the other schools. Judging by mention of curricular innovations, the proportion aware of them at Highland Park lay within the range of proportions elsewhere. The disproportionately frequent mention of innovations from Highland Park seems to have lain in categories other than curricular innovations—especially in new methods of solving problems (line 12 of table 6-3) and in new organizational structures (line 13).

Appendix M

Some Considerations of Validity

The internal validity of these results at Highland Park depends on such things as the instruments, the methods of collecting data, the manner of asking questions, and the sort of schools chosen for comparisons. Wherever comparison data were available, we expected Highland Park to outperform the others in making changes in favor of our hypotheses. We do not claim that our designs for comparisons were the most powerful conceivable. Most of the time our designs were weaker than we wished. But there are other matters to justify this appendix.

Specification of events. In ascertaining the occurrence of concrete changes in organization patterns, we reported in chapter 5 only specific, localized behavior patterns with definite boundaries. We were not dealing with mere feeling tones on the part of the persons reporting the concrete events to us. For example, if a staff member said, "Area coordinators talk more with the teachers in their area than they used to," we took this only as a psychological event for that respondent. However, if a staff member said, "We now have weekly meetings with our area coordinators to get news about administrative policies and what other areas are doing," we took this as a report of the new organizational structure that could be observed by any reasonably intelligent person visiting the school. Still, we did not accept such a report from a single respondent; we required corroboration from other Highland Park staff members and from CASEA observers.

Testimonials. In this project we took precautions to guard against relying on the "testimonials" of a few avid fans of organizational training. One thing that makes testimonials dubious is the difficulty of ascertaining whether people who would respond unfavorably to a training event were as free to report their feelings as were persons who felt favorable. This danger recedes to the extent that the investigator can make it at least equally likely that both favorable and unfavorable reports will reach him.

Actually, unfavorable reports had a head start on us in that the occur-

rence of no change at all would have been an unhappy outcome; it follows that a lack of report of any change would constitute not merely an indifferent event, but an unfavorable report. No news was bad news for the aspirations of the trainers. Favorable reports had to be corroborated in a manner that would outweigh any lack of reports from persons presumably involved in the event. Beyond that, the CASEA staff carried out numerous formal interviews and informal discussions to elicit unfavorable reports of events first and favorable changes only secondarily. Part of the job of the organizational trainer is to discover not just what is going right, but more importantly what is going wrong; *he must*, if he is to be successful, discover and alter the path of what is going wrong before it becomes inaccessible to change through training. From this perspective, disinterested, basic researchers are *less* likely to put themselves in a position to receive evidence of unfavorable organizational processes than are researcher-trainers who seek to help an organization to improve.

Openness. Perhaps the most important reason that the CASEA staff would receive an unfavorable report was the trust relationships that developed between trainers and Highland Park staff. When the Highland Park staff encountered interpersonal difficulties that slowed their process toward more effective communication, they were motivated to bring these troubles out in the open so that we would be able to facilitate improvement through some training technique. Many times we were greeted by a staff member remarking, "Say, there is something I need to talk over with you!" We often were approached by several persons who jointly wanted to express something that bothered them in hopes that the training would expose the problem and help to solve it.

Finally, during our last training event with the whole staff, we spent nearly the entire time probing them for perceptions of their goals that still were not achieved and where they considered that regression had occurred. Those responses were described in chapter 4.

It is indeed unlikely that any significant, unfavorable event escaped our notice. On the unfavorable side, we did discover that no discernible improvement occurred in the communication, the amount of trust, or the amount of collaboration between the physical education teachers and the counseling staff. Also, although the guidance committee attempted to clarify the role of counselor so that the function of disciplinarian could be removed from it, we found no evidence that the committee made any substantial progress toward the goal.

Other unfavorable events had to do with a lack of clarity about appropriate staff behaviors in policing the hallways during the lunch hour and with the staff's inability to improve communication between the staff members who did not participate in the summer workshop and the rest of the staff.

The issue of trust and exposing oneself is heightened even more in Highland Park by the fact that many staff members began by thinking of our intervention as "sensitivity training." There were indications in the essays some members wrote that they anticipated the summer workshop with apprehension. Given these reasons for caution on the part of the participants, we believed that they would give us more open answers *after* they had developed a feeling of trust. Indeed, common experience of organizational trainers indi-

cates that the opening days of a workshop are full of polite, superficial exchanges while the later parts of the workshop are characterized by interaction producing information that could even be dangerous to the participants if used unethically. Accordingly, we asked the Highland Park staff to fill out the "principal questionnaire" and the "communication questionnaire" on the last day of the summer workshop, even though we meant these to be part of the pretest data, rather than before any training at all.

A claim often is made that when people in a school develop friendly feelings toward investigators they try to answer questionnaires and interviews the way they think the investigators want. When it is fairly clear to the school people what might make investigators happy, the data given by the questioning might be spuriously favorable. But if the Highland Park people had felt this urge, they would have filled out the questionnaires on the last day of the summer workshop in an exaggeratedly favorable manner; this would have made it especially difficult for the favorable differences to appear between the pretest and the posttest. Either the staff gave us the truth as they saw it in August, or the favorableness in May was even more so than its exaggeration in August.

Relevant events. What events are relevant for observation in a project like this one? We largely have appealed to the theory presented in chapter 2 for claiming relevance for our data. But also, the Highland Park Project was not begun in an orderly manner. We did not conceive the possibility for the project, decide upon the kinds of schools we intended to study, design the interventions, make a list of all conceivable schools in which they might be carried out, and then go out looking for a school. On the contrary, persons from Highland Park approached us with a request for training at a time when we were only beginning to consider organizational training for a school faculty. Consequently, we focused most of our attention before the training began on preparing the design of the summer workshop so as to make sure we would carry it out effectively. In the meantime, we prepared copies of some questionnaires that had been used to assess characteristics of school staffs elsewhere; we also prepared other questionnaires in preliminary form, revising them later during the year. Because of this somewhat opportunistic data collection, the reader will no doubt find some of the data more relevant than others. To avoid the possibility of biased selections on our part, however, it is important that we present the bulk of the data gathered, even though the relevance of some of the data may seem tenuous. In the final analysis, we have to rely on the reader to exercise his own judgment about the relevance of our choices of theory, outcome events, and data.

EXTERNAL VALIDITY

We showed in chapter 6 that Highland Park usually exhibited more of the characteristics we meant our training to produce than did other schools. The question of whether these comparison schools enable us to compare Highland Park with groups we did *not* observe is the question of external validity.

Researchers usually attempt to maximize external validity through randomization to make the risk of being wrong in one direction no greater than

being wrong in any other direction.* Randomization is extremely important when effects are slight and the researcher is uncertain about other variables that might be relevant. Randomization is less important when the effects are large and there is confidence that the relevant variables are being observed. (In studying psychophysical thresholds, for example, selecting subjects randomly is unheard of.) The success shown in achieving the predicted outcomes made in this project was high. The hypothesis is worth further investigation that we have put our fingers on a cluster of variables significant in bringing about organizational changes in schools.

We did not achieve randomization in this project. The sample was extremely small. We had one experimental "subject" (that is, the Highland Park faculty) and a few other such "subjects" for comparison. Neither the experimental subject nor the comparison subjects were randomly selected. Indeed, it seems to us that random selection in a developmental project like this one is virtually impossible. Randomization is meaningful only to the extent that an exhaustive list, or one nearly so, can be made of the population in advance —that is, only when each member of this population can be uniquely specified. (One example is the list of households or "sampling units" in survey research.) How should we specify the schools constituting the population from which Highland Park could be conceived to be drawn? Since we would never propose using the techniques of the project with a faculty unwilling to undergo such training, certainly one characteristic of schools in the relevant population would be willingness to enter into training. But how could we ascertain such schools uniquely, unambiguously? We would have no way of finding out with certainty which schools would be willing to enter into organizational training unless we negotiated with all conceivable schools until we had reached a firm agreement to carry on training with them. For practical reasons, we would then have to break our promises to all but a few. These pitfalls make the whole enterprise impractical.

From another point of view, randomization is not only impractical but also undesirable. The overriding purpose of a developmental activity like this one is not to establish population parameters but to discover what can be done to alter organizational processes in schools and what kinds of outcomes can be derived from different types of training. The goal of our projects is to develop a catalog of school organizational characteristics, training characteristics, and outcome characteristics that mesh. Such a catalog can best be written by plotting points on appropriate graphs while working in a sequence of schools, regardless of whether the schools are chosen randomly from one specified population of schools. A parallel example would be a handbook on the load-bearing characteristics of soils.The soils in such a handbook are

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* This point is widely misunderstood, even among social scientists. Randomization does not guarantee that one will be correct about any particular parameter of the population; it does not even increase the researcher's chances of being correct *this time* in making an estimate of any population parameter. Randomization, no matter how thorough, tells the researcher nothing about any *single* member of the population that he has not yet observed; it only increases the likelihood that he will *more often* be right than wrong about population parameters if he repeats his efforts.

never selected randomly. Rather, they are selected to fall arbitrarily throughout the ranges of variables of previously ascertained relevance.

Similarly, knowledge of population parameters has limited usefulness for the outside change agent or inside practitioner interested in improving organizational processes in one particular school. Such knowledge is useful only in preparing him for the ranges of variables that might be encountered. But neither does knowing the range of variables reduce his uncertainty much when entering into an intervention. Before the change-oriented person (from outside *or* inside) can work intelligently in a school he must ascertain the levels of variables in that school, no matter how sophisticated he may be about the parameters in the population.

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